

EPA Environmental Management System Benchmark Report:

A Review of Federal Agencies and Selected Private Corporations

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NOTICE

The **Environmental Management System Benchmark Report: A Review of Federal Agencies and Selected Private Corporations** on-line document does not contain any appendices. These are available in the hard copies only. To obtain a hard copy, call, fax, or write Priscilla Harrington at:

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EXECUTIVE SUMMARY

Background

Executive Order 12088 requires the United States Environmental Protection Agency (EPA) to provide technical assistance and guidance to Federal agencies to assist them in complying with environmental regulations and statutes. In recognition of this responsibility, EPA's Federal Facility Enforcement Office (FFEO) has begun to implement an outreach program to facilitate the transfer of technical information and guidance to these agencies. One component of that program involves identifying areas in which Federal agencies need improvement to more successfully fulfill their environmental responsibilities. This Environmental Benchmark Report is one part of that effort.

The purpose of this report is to evaluate how Defense Related Agencies (DRAs), certain private corporations (Participating Corporations (PCs)), and Civilian Federal Agencies (CFAs) perform against a benchmark developed to represent ideal organizational, managerial, and operational performance in the execution of environmental responsibilities. Data for this evaluation came from a questionnaire completed by 17 CFAs in 1993, and a separate questionnaire completed by three private corporations and by four Defense Related Agencies (the Departments of the Army, Navy, Air Force, and Energy) in 1994.

Methodology

Traditional benchmark analyses identify one "Best in Class" organization and compare others to that model. In order to ensure that the benchmark developed for this project was equally applicable to public and private sector organizations with widely disparate missions, the benchmark used in this report was arrived at through the review of numerous draft and final documents published by Federal agencies, and by national and international standard setting agencies. The benchmark elements are composed of those standards that are common to most or all of the reviewed publications.

The benchmark used to evaluate DRAs, PCs, and CFAs is composed of six major topic areas (Benchmark Elements). A list of each Benchmark Element and a description of "Best in Class" performance under each element is described in Exhibit ES-1.

Exhibit ES-1 Benchmark Elements

<p><i>Organizational Structure</i></p> <ul style="list-style-type: none"> Best in Class organizations have an organizational structure that gives authority, input, and voice to environmental performance
<p><i>Management Commitment</i></p> <ul style="list-style-type: none"> Best in Class organizations possess and demonstrate a commitment to environmental excellence at each and every stage of the management hierarchy, and insist on integration of environmental awareness and concerns into all relevant business operations
<p><i>Implementation</i></p> <ul style="list-style-type: none"> Best in Class organizations carry out their daily business operations in ways that integrate environmental protection into their business conduct
<p><i>Information Collection/Communication/Management/Follow-up</i></p> <ul style="list-style-type: none"> Best in Class organizations continually monitor environmental performance through the use of formal tracking and reporting mechanisms. Information acquired through these mechanisms is evaluated, disseminated, and used to continually improve environmental performance
<p><i>Internal and External</i></p> <ul style="list-style-type: none"> Best in Class organizations foster and use formal and informal channels to communicate environmental commitment and performance information. Employee communication is encouraged to develop cooperation and commitment, including bringing together employees from different disciplines
<p><i>Personnel</i></p> <ul style="list-style-type: none"> Best in Class organizations ensure that employees are capable of developing and implementing environmental initiatives. Employees are hired, trained, and deployed in ways that ensure that staff understand their environmental responsibilities and receive the training and support necessary to achieve environmental excellence

In order to evaluate questionnaire responses against these six Benchmark Elements, key indicators were developed that illustrate organizational attributes or activities whose presence indicates behavior consistent with the Benchmark Element. To the greatest extent practicable, questions on both questionnaires were "best fit" into the closest and most relevant key indicator.

This evaluation does not rank the participating respondent groups. This report is not designed to publicly evaluate the performance of any individual organization; thus, information

about the range and patterns of responses within each respondent group is presented, rather than identifying questionnaire responses by organization. In addition, this report does not attempt to evaluate overall environmental compliance performance, either present or historical, of a particular organization. Instead, the intention is to determine if certain organizational enabling systems have been established to allow the respondent group to fully implement a sound environmental management program. Whether or not a particular organizational group as discussed in this report has taken full advantage of these enabling systems and translated this into an equally good compliance record was not evaluated during this assessment and is not the subject of this report.

Conclusions drawn from this analyses of questionnaire responses should be evaluated in light of the data limitations inherent in this project. Since the questionnaires were developed and distributed prior to the development of the Benchmark Elements and key indicators, the scope of the questions does not always correlate closely with the benchmark components. This is especially true for the questionnaire sent to Civilian Federal Agencies which was primarily focused on environmental compliance activities. In addition, the CFA questionnaire was distributed in January of 1993 and the questionnaire to Defense Related Agencies and Corporate Participants was distributed in the Spring of 1994. Changes in organizational practices occurring since that time are not reflected in this report.

Findings and Conclusions

An analysis of questionnaire responses reveals meaningful data concerning the comparative behaviors of the respondent groups and highlights each group's areas of relative strength and weakness. In general, Defense Related Agencies and Corporate Participants exhibit significantly more attributes and behaviors consistent with key indicators than do the Civilian Federal Agencies. Within each Benchmark Element, fifty percent or more of the Defense Related Agencies report indicative behaviors in all key indicators for which questions were asked. In most instances all four Defense Related Agencies report indicative behaviors. Corporate Participants also consistently report indicative behaviors in each of the Benchmark Elements, but a majority of these respondents do not report indicative behaviors for one key indicator under the elements of Management Commitment, Implementation, and Information Collection/Management/Follow-up.

Under the Benchmark Element entitled Organizational Structure, all seven DRA and Corporate Participants report the presence of an organizational mission statement that sets forth environmental objectives, organizational charts that describe clear lines of authority, responsibility, and accountability for environmental functions, and the tracking of environmental statutory and regulatory developments. In addition, they each state that environmental functions are represented at the highest level of the organization. In contrast, only four of 17 CFAs report that they have formal systems to track regulatory and statutory activities and a slim majority (9 of 17) state that senior managers meet to consider environmental issues on a periodic basis. The other two key indicators were not addressed in the CFA questionnaire.

In response to questions related to the Benchmark Element entitled Management

Commitment, a majority of all three respondent groups indicate that environmental considerations are integrated into organizational business planning processes. All Defense Related Agencies and two of three Corporate Participants indicate that management's commitment goes beyond compliance with environmental requirements. In contrast, only five of 17 CFAs report that management's stated environmental commitment leads to action in terms of resource allocation, training, and environmental program support. All Defense Related Agencies and Corporate Participants report that budget allocations are carried out in ways that allow environmental projects to compete on an equal footing for scarce resources. In contrast, while 12 of 17 CFA's report engaging in the Office of Management and Budget (OMB) A-106 capital budgeting process, only six respondents indicate that environmental staff is actively involved. The one area in which both Defense Related Agencies and Corporate Participants could improve is in the reported use of formal risk management programs. Only two of four Defense Related Agencies and one of three Corporate Participants report using these systems. CFA's were not asked to address this issue.

For the Implementation Benchmark Element, respondents are evaluated against three key indicators; the establishment of environmental performance goals that go beyond compliance, the existence of a comprehensive, multi-media environmental programs, and the development and distribution of formal environmental guidance materials throughout the organization. Each response from Defense Related Agencies reveal indicative behaviors on all three of these indicators. Similarly, a majority of CFAs respond positively regarding multi-media programs and guidance materials, the two questions they were asked under this element. All three Private Corporations report the existence of a comprehensive, multi-media environmental program. However, only two of these respondents report that their organizations establish environmental performance goals that go beyond compliance, and only one of three respondents report the development and use of organization-wide guidance materials.

For the Information Collection/Management/Follow-up Benchmark Element, CFAs were asked questions that relate to only two of the six key indicators. A large majority of CFAs report the use of environmental information management systems, although no CFAs report the use of centralized, Agency-wide information repositories. Six of 17 CFAs use systems to report regional compliance data to headquarters personnel. A majority of Defense Related Agencies and Corporate Participants report that they use information management systems to track environmental performance, that they document environmental performance results, and that they take corrective actions to address identified problems. Only one of three Corporate Participants and two of four Defense Related Agencies report using trends analyses to uncover root causes of environmental problems.

For the Internal/External Communication Benchmark Element, CFAs were again asked questions that relate to only two of the six key indicators. Only three of 17 CFAs report that their organizations have well publicized channels for employees to raise environmental concerns. With regard to their organization soliciting environmental input from outside parties, 10 of 17 CFAs report that they either compare their environmental programs to those of other organizations, or that they engage in a program to secure third party environmental assessments of their activities.

All respondents from the other two groups report the existence of well publicized channels for employee environmental concerns, state that they actively solicit employee suggestions and utilize a variety of communication mechanisms to communicate their environmental commitment to employees. In response to questions concerning the solicitation of environmental input from external parties, all four Defense Related Agencies and two of three Corporate Participants report that they utilize formal community outreach programs that serve this purpose.

Finally, every respondent group was asked questions relating to each of the four key indicators under the Personnel Benchmark Element. All of the Defense Related Agencies report that they engage in environmental awards programs to recognize the environmental achievements of employees, use forecasting tools to project future environmental personnel needs, and require environmental training for all employees. Three of four Defense Related Agencies report that they make all staff with environmental responsibilities accountable for their environmental performance through performance reviews or through other measures. Corporate Participants report similar data in these areas. All three of these respondents report data that satisfies each key indicator. CFA performance is less strong. Only five of 17 CFAs report utilizing formal training programs for compliance staff. 12 CFAs report that their organizations consider environmental performance the responsibility of every employee, but only five CFA respondents include environmental compliance in employee performance evaluations. Finally, only four of 17 CFAs report the use of environmental award systems to recognize employee environmental excellence.

CHAPTER 1: INTRODUCTION

1.1 Background

Executive Order 12088 (§ 1-301) requires the United States Environmental Protection Agency (EPA) to provide technical assistance and guidance to Federal agencies in their effort to comply with environmental regulations and statutes. In recognition of this responsibility EPA's Federal Facility Enforcement Office (FFEO) has begun to implement an outreach program to facilitate the transfer of technical information and guidance to these agencies. As part of this effort, FFEO is in the process of developing a strategy to assist the smaller non-military (civilian) Federal agencies in improving their performance of environmental compliance tasks.

In order to help identify areas where technical assistance resources should be directed to assist Civilian Federal Agencies (CFAs) with their compliance responsibilities, FFEO sent out questionnaires to 28 CFAs in January 1993. Among other things, this questionnaire asked respondents to indicate how their Federal agency is structured, managed, and operated so as to fulfill environmental compliance responsibilities. Seventeen CFAs responded to this portion of the questionnaire.

In the Spring of 1994, FFEO developed and distributed a separate questionnaire to the Departments of Energy, Army, Navy, and Air Force (hereafter "Defense Related Agencies", or "DRAs") and to five private companies. All of the Defense Related Agencies and three of the private companies completed and returned this questionnaire. These completed questionnaires provide data on a wide range of environmental management activities and provide a basis to draw comparisons between the CFAs and these organizations.

FFEO has decided to use a benchmark approach to evaluate the environmental organizational and operational performance of CFAs along with that of Defense Related Agencies and Corporate Participants. Unlike traditional benchmark analyses that identify a "Best in Class" organization that exemplifies an ideal model against which other organizations are measured, this analysis identifies "Best in Class" organizational and operational benchmark elements through an examination of various national and international standards documents. Questionnaire responses were used to compare the performance of the three types of organizations (CFAs, Defense Related Agencies, and Corporate Participants) against these benchmark elements.

The purpose of this report is to evaluate how each group of organizations perform against a benchmark developed to indicate ideal organizational, managerial, and operational performance in the execution of environmental responsibilities. This report is not designed to publicly evaluate the performance of any individual organization; thus, information about the range and patterns of responses within each respondent group is presented, rather than identifying questionnaire responses by organization.

1.2 Document Organization

This document is organized into six chapters. Chapter 2 describes the methodology used in developing the benchmark and in evaluating reported organizational practices against benchmark

elements. Chapters 3, 4, and 5 discuss and evaluate the questionnaire responses of the Defense Related Agencies, Corporate Participants and of the participating CFAs, respectively. Chapter 6 summarizes the results of the benchmark analyses and compares the patterns of responses between the responding organizational groups.

1.3 Acknowledgements

FFEO gratefully acknowledges the participation of all of the responding Federal agencies and Corporate Participants whose responses to the questionnaires formed the data for this report. Exhibit 1-1 lists all of the organizations that provided data for this analysis.

Exhibit 1-1

Respondent Organizations

Civilian Federal Agencies

Department of the Treasury
United States Postal Service
Federal Aviation Administration
Department of Commerce
National Oceanic and Atmospheric Administration (NOAA)
National Security Administration
Department of Agriculture
Department of Agriculture/Agricultural Research Service
Department of Agriculture/Grain Inspection Service
Department of Agriculture/Animal and Plant Health Inspection Service
Department of Agriculture/Soil Conservation Service
Department of Justice
Department of Commerce
Environmental Protection Agency/Office of Administration and Resources
Management

Three anonymous Civilian Federal Agency responses

Defense Related Agencies

Department of Energy
Department of the Army
Department of the Navy
Department of the Air Force

Private Sector Corporations

Chevron Corporation
Xerox Corporation
3M Corporation

CHAPTER 2: METHODOLOGY

2.1 Benchmarking Overview

In recent years, benchmarking has proven to be a valuable tool for organizations committed to continual improvement, particularly in the area of environmental performance. Through benchmarking, managers can compare the attributes of their organization against the those of a highly successful ("Best in Class") organization that has been identified as an exemplary performer. Benchmarking can be an extremely useful tool to help organizations recognize areas in which improvement is needed, and to provide a model toward which improvements can be directed.

2.2 Benchmarking Methodology

The goal of the benchmarking process developed for this report is to identify those areas in which the structural, managerial, and operating characteristics and practices of CFAs require improvement in order to rise to the level of "Best in Class" performance. However, the methodology used to establish the "Best in Class" benchmark for this study varies significantly from traditional benchmarking procedures.

Rather than identifying one organization that could serve as a model toward which CFAs, Defense Related Agencies, and private companies could all strive to emulate, the project team identified, gathered, and reviewed various documents that present an ideal set of characteristics for the performance of organizational environmental responsibilities. These documents were developed by national and international standard setting organizations, as well as Federal agencies. Some of these documents are in final form, others are in draft. A list of the documents that were reviewed is found in Exhibit 2-1.

In addition, this report does not attempt to evaluate overall environmental compliance performance, either present or historical, of a particular organization. Instead the intention is to determine if certain organizational enabling systems have been established to allow the respondent group to fully implement a sound environmental management program. Whether or not a particular organizational group as discussed in this report has taken full advantage of these enabling systems and translated this into an equally good compliance record was not evaluated during this assessment and is not the subject of this report.

The project team reviewed these documents to identify organizational characteristics, management attributes, and operational features that appeared in most or all of the standard setting documents and were equally applicable to both public and private organizations. Six areas meeting the above criteria were identified. These became "benchmark elements" for the purposes of this analysis. Exhibit 2-2 lists and describes each of these elements.

Exhibit 2-1

Documents Reviewed on Benchmark Development Process

Guideline for a Voluntary Environmental Management System, Revision 8.1. Canadian Standards Association, March 1, 1994

Request for Environmental Leadership Program Pilot Project Proposals, United States Environmental Protection Agency, Federal Register Notice 58FR4802, January 15, 1993

Proposed American National Standard, NSF International Standard for Environmental Management Systems - Guidelines for Environmental Auditing - Principles and General Practices. NSF 100-1994. Draft 3.5, February 1994

Proposed American National Standard, NSF International Standard for Environmental Management Systems - Guiding Principles and Generic Requirements for Environmental Management Systems. NSF 110-1994. Draft 5.1, May 1994

Protocols for Conducting Environmental Management Assessments of DOE Organizations, United States Department of Energy, DOE/EH-0326, June 1993

A Guideline for a Voluntary Management System, NSF International. Revision 5.0, April 12, 1993

Exhibit 2-2 Benchmark Elements

<p><i>Organizational Structure</i></p> <ul style="list-style-type: none"> • Best in Class organizations have an organizational structure that gives authority, input, and voice to environmental performance
<p><i>Management Commitment</i></p> <ul style="list-style-type: none"> • Best in Class organizations possess and demonstrate a commitment to environmental excellence at each and every stage of the management hierarchy, and insist on integration of environmental awareness and concerns into all relevant business operations
<p><i>Implementation</i></p> <ul style="list-style-type: none"> • Best in Class organizations carry out their daily business operations in ways that integrate environmental protection into their business conduct
<p><i>Information Collection/Management/Follow-up</i></p> <ul style="list-style-type: none"> • Best in Class organizations continually monitor environmental performance through the use of formal tracking and reporting mechanisms. Information acquired through these mechanisms is evaluated, disseminated, and used to continually improve environmental performance
<p><i>Internal and External Communication</i></p> <ul style="list-style-type: none"> • Best in Class organizations foster and use formal and informal channels to communicate environmental commitment and performance information. Employee communication is encouraged to develop cooperation and commitment, including bringing together employees from different disciplines
<p><i>Personnel</i></p> <ul style="list-style-type: none"> • Best in Class organizations ensure that employees are capable of developing and implementing environmental initiatives. Employees are hired, trained, and deployed in ways that ensure that staff understand their environmental responsibilities and receive the training and support necessary to achieve environmental excellence

Once the benchmark elements were identified, the project team developed a list of indicative behaviors that exemplify organizational performance consistent with each benchmark element. The presence or absence of these "key indicators" within the questionnaire responses was the determining factor in analyzing whether or not reporting organizations were achieving benchmark performance. Organizations reporting significant numbers of key indicators within a benchmark element were determined to be demonstrating "Best in Class" performance within that element; organizations reporting few or no indicative behaviors were determined to be deficient in that benchmark area.

Key indicators were identified through both an objective review of the standard setting documents listed above, and through a subjective process where reported data was evaluated against the definitions for each benchmark element. The list of key indicators associated with each benchmark element is listed in Exhibit 2-3.

Exhibit 2-3

Key Indicators of Best in Class Performance

Organizational Structure

- Organizational mission statement exists that sets forth environmental business focus, going beyond environmental compliance
- Clear lines of authority, responsibility, and accountability are established for environmental functions
- Formal systems for statutory and regulatory tracking/monitoring exist and access to legal resources is readily available
- Environmental management functions are represented at the high(est) levels of the organizations

Management Commitment

- Organizations make resources available to identify, develop, initiate, and transfer between facilities environmental improvement technologies and strategies
- Environmental concerns are integrated into organizational business planning
- Environmental considerations play a role in all key organizational decisions
- Management demonstrates a commitment to environmental protection that goes beyond environmental compliance
- A formal environmental risk management program has been instituted and is used to assess potential risks from all proposed and existing operations
- Capital budgeting evaluation criteria are used to allow environmental projects to compete fairly for investment resources
- Headquarters level policies exist that establish an environmental sense of direction for facility level operations
- Environmental criteria are used for the selection and management of contractors/vendors

Exhibit 2-3
Key Indicators of Best in Class Performance (continued)

Implementation

- Short- and medium-range environmental performance goals are established for individual business operations and for the organization as a whole
- A wide range of potential environmental impacts are address through comprehensive multi-media environmental programs. These programs include, but are not limited to:
 - pollution prevention
 - recycling
 - reuse
 - control
 - compliance
 - affirmative procurement
 - energy conservation
 - emergency preparedness and response
- Formal guidance is developed and disseminated to help ensure organizational environmental excellence

Information Collection/Management/Follow-up

- Information baselines have been established to identify, track, and measure inputs (i.e., energy, water, materials) and wastes and emissions outputs
- Information management systems are used to track and evaluate environmental performance. These systems measure and verify data, evaluate collected data, and identify improvement opportunities
- Monitoring results are documented and distributed in a timely manner to appropriate management representatives
- Business operations are modified in response to data findings to correct performance and meet environmental goals. Corrective actions are tracked and verified to ensure successful completion
- "Lessons learned" programs have been implemented to identify improvement opportunities
- Trends analyses are performed to identify root causes of environmental performance concerns

Exhibit 2-3

Key Indicators of Best in Class Performance (continued)

Internal and External Communication

- Channels exist for employees to anonymously communicate environmental performance concerns without retribution
- Employee suggestions are actively solicited. Concerns raised are addressed and responses documented
- Successful environmental programs and strategies are communicated throughout the organization
- Environmental awareness and performance information is communicated through the use of employee newsletters, bulletin boards, electronic mail, etc.
- Full and open cooperation exists with external oversight organizations
- Input regarding environmental performance and opportunity identification is actively solicited from external parties (e.g., customers, neighbors, regulators, general public)

Personnel

- Sufficient qualified staff are hired, deployed, and trained to ensure that all aspects of the business operation are executed in accordance with the organization's environmental commitment
- All employees receive initial and ongoing training to ensure that they 1) understand the environmental requirements of their job, and 2) have the skills necessary to execute their job responsibilities in an environmentally sound manner
- Environmental excellence is the explicit responsibility of every employee throughout the organization, as demonstrated by the presence of environmental criteria in each employee's job description/performance evaluation, or by other means
- Exemplary environmental efforts are recognized and/or rewarded

2.3 Data Limitations

The evaluation of questionnaire responses reveals a great deal of information concerning the ways in which Defense Related Agencies, Civilian Federal Agencies, and three private corporations structure themselves and operate in order to fulfill their environmental agenda. A comparison of the responses between groups identifies areas in which each group excels, and areas in which improvement is needed.

Conclusions drawn from the questionnaire responses must be evaluated with a clear understanding of the limitations inherent in this data. These limitations are discussed below.

The primary data limitation involving the CFA questionnaire concerns the specific language and scope of the questions posed to respondents. Both questionnaires were distributed prior to the development of benchmark elements and key indicators. The questionnaire distributed to CFAs focused predominantly on issues relating to environmental compliance. Therefore, questions posed to CFAs had to be "best fit" into a key indicator associated with one of the six benchmark elements. In a number of instances, no questions neatly fit into certain key indicators. These instances are

clearly delineated in the report. In addition, this questionnaire elicited a large number of responses consisting of one or two word positive or negative responses. Finally, the CFA questionnaire was sent to respondents in January of 1993. Organizational changes occurring since that date are not reflected in the data.

While the questionnaire sent to Corporate Participants and Defense Related Agencies also was distributed prior to the development of the Benchmark Elements and key indicators, its scope more clearly fits the developed benchmarks. Hence, there are significantly fewer data gaps. There are instances in which multiple questions provide data for the same key indicator. In these instances, a positive response to any of the questions is considered to represent behavior consistent with the key indicator. In addition, it should be noted that only three companies participated in this effort. Therefore, responses should not be interpreted as indicative of overall private sector activities in these areas. Rather, they reflect the reported activities of the three responding corporations.

Comparisons and conclusions drawn from questionnaire responses can only be as good as the data upon which they are based. By design, questionnaires ask respondents to report upon their own behaviors or those of the organization to which the respondent belongs, based upon the perceptions of the individual completing the questionnaire. Therefore, questionnaire responses may be affected by the responding individual's position within the organization, their knowledge of organizational activities and characteristics in other parts of the organization, and the willingness of the individual to answer fully and candidly.

CHAPTER 3: Defense Related Agencies

3.1 Data Sources

This chapter summarizes the responses received from four Federal agencies (i.e., military agencies and Department of Energy; hereafter "Defense Related Agencies" or "DRAs") to a 94 - question survey. In general, the survey focused on eight topic areas: organizational structure ; environmental commitment; environmental protection program; formality of environmental program; internal and external communication; staff resources, training, and development; evaluation , reporting, and corrective action; and environmental planning and risk management. A copy of the questionnaire is included in Appendix A, Exhibit A-2, of this document.

Responses to the questionnaire were received from the following Defense Related Agencies:

- United States Department of the Air Force
- United States Department of the Navy
- United States Department of the Army
- United States Department of Energy

3.2 Performance Measured Against Benchmark Elements

3.2.1 Element 1: Organizational Structure

"Best in Class" organizations have an organizational structure that gives authority, input, and voice to environmental performance.

Overall Findings:

In general, all of the DRAs responding to the survey reported that they have developed organizational structures that enable them to effectively provide direction and authority to their environmental programs.

Four key indicators have been identified for "Best in Class" organizations in regard to organizational structure.

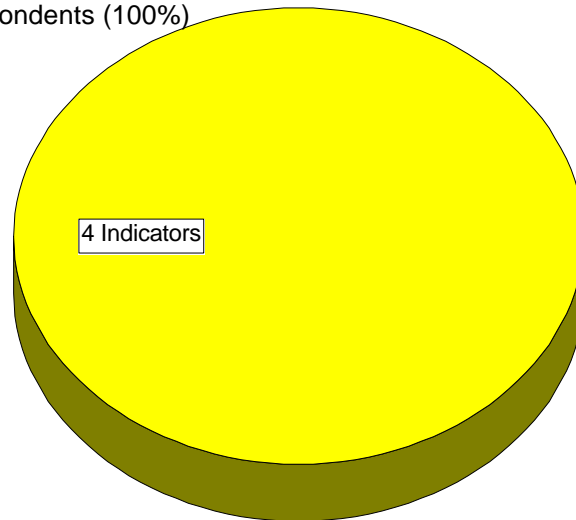
1. Organizational mission statement exists that sets forth environmental business focus, going beyond environmental compliance.
2. Clear lines of authority, responsibility, and accountability are established for environmental functions.
3. Formal systems for statutory and regulatory tracking/monitoring exist and access to legal resources is readily available.

4. Environmental management functions are represented at the high(est) levels of the organization.

As an introductory overview, Exhibit 3-1 presents the total number of respondents reporting multiple key indicative behaviors.

Exhibit 3-1
Element 1: Organizational Structure Key Indicators
Reported by Defense Related Agencies

All 4 Respondents (100%)



The following discussion compares specific survey findings against each of the four key indicators representing "Best in Class" activities with regard to organizational structure.

Organization Structure Key Indicator:

1. Organizational mission statement exists that sets forth environmental business focus, going beyond environmental compliance.

Findings:

All of the DRAs surveyed reported that they have an environmental policy statement presented in their organization's mission statement (either at the headquarters level or the subordinate command level). For example, one respondent expressed their environmental mission commitment as, "Environmental compliance is an integral part of our mission and will be included in our daily operations and our strategic plans." Three of the four DRAs surveyed report that their major

program offices with environmental responsibilities include an environmental component in their vision and mission statements that complement the overall departmental mission.

Organizational Structure Key Indicator:

2. Clear lines of authority, responsibility, and accountability are established for environmental functions.
-

Findings:

All of the DRAs surveyed report that they have organizational charts that illustrate clear lines of authority for their environmental management structure. Typically, the management structure is headed by an Assistant Secretary, under who serves a director of environmental operations leading numerous environmental technical support divisions.

In general, the DRAs as a group appeared to consciously and clearly define environmental responsibilities and communicate them to their employees. Three of the four agencies report that environmental responsibilities are defined and communicated to all of their employees whose activities may impact environmental performance. The respondents list a variety of methods used for documenting environmental responsibilities of their employees, including: regulations, guidance documents, specialty training standards, lesson plans, career development courses, position descriptions, policy directives, manpower standards, instructions, and pamphlets. In addition, responsibilities are communicated to employees through a number of other methods, including performance standards, mission statements, training courses, publications, and communication with supervisors.

Organizational Structure Key Indicator:

3. Formal systems for statutory and regulatory tracking/monitoring exist and access to legal resources is readily available.
-

Findings:

Statutory and regulatory tracking/monitoring is performed by all of the DRAs surveyed according to the questionnaire responses. The methods used to track regulatory developments varied among the survey respondents and included: subscriptions to periodicals (*BNA Environmental Reporter*, *Federal Register*, and media-specific technical journals and newsletters), training courses

on emerging compliance requirements, and on -line data retrieval through the Defense Environmental Network and Information Exchange (DENIX) bulletin board. Several of the agencies have also established centers or institutes to monitor changing Federal environmental regulations, policies, and laws. One agency has an Office of Environmental Guidance that develops a bimonthly environmental regulatory update table for distribution Department-wide. In addition, two of the four agencies appear to be organized to have ready access to legal resources for interpreting new environmental regulations. These two respondents indicate that attorneys in their Office of General Counsel are available to assist in interpreting environmental regulations, and one respondent indicated that their agency has a Legal Services Environmental Law Division to assist with this function.

Organizational Structure Key Indicator:

4. Environmental management functions are represented at the high(est) levels of the organization.
-

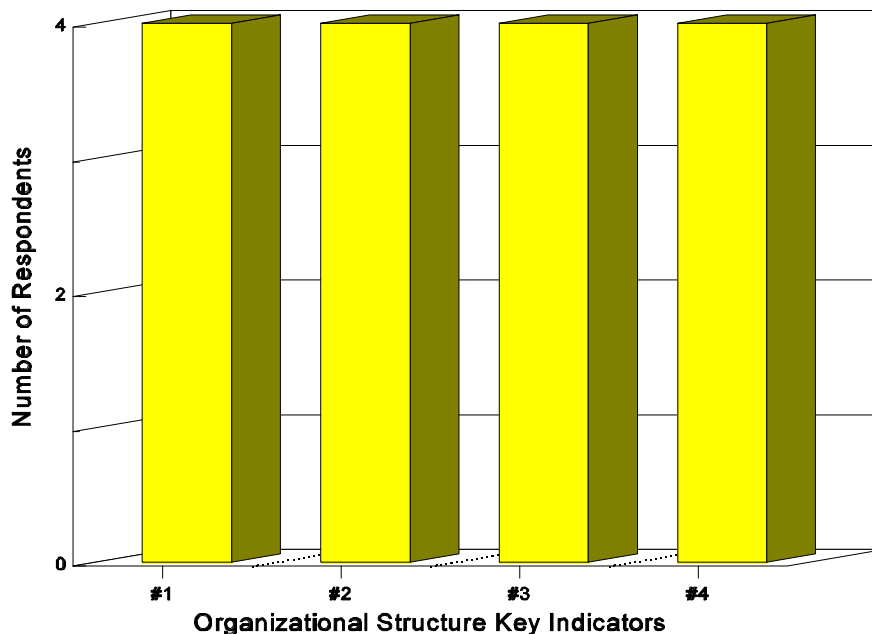
Findings:

All of the DRAs surveyed report having environmental management functions represented at high levels of their organization. The positions of high-level authority with direct environmental management responsibilities vary among the survey responses and include: Director, Environmental Protection, Safety and Occupational Health; Assistant Secretary of the Navy (Installations and Environment); Assistant Secretary for Environmental Management; Assistant Secretary for Environment, Safety, and Health; Assistant Secretary of the Air Force for Manpower, Reserve Affairs, Installations, and Environment (presidential appointee reporting directly to the Secretary of the Air Force); Assistant Secretary of the Environment for Installations, Logistics, and Environment; Deputy for Environment, Safety and Occupational Health; and Director of Environmental Programs (a brigadier general). Most respondents report that environmental policy and standards are established at the Assistant Secretary level and that technical support and environmental oversight of line organizations is performed by a Director of Environmental Programs or a Civil Engineer Support Agency. When asked what specific high-level positions have authority to ensure compliance with Federal and state environmental laws and regulations, the other Federal agency respondents report a variety of positions, including: installation Commanding officers, Deputy Chief of Staff and Environmental Counselor (reporting directly to the Secretary); Chief, Compliance Division, Directorate of Environmental Quality; and Director of Environmental Programs.

Benchmark Element Summary:

This section summarizes the collective behavior of the four responding DRAs as evaluated against the key indicators for this Benchmark Element. Exhibit 3-2 presents the total number of respondents reporting each key indicative behavior.

Exhibit 3-2 Number of Defense Related Agencies Reporting Each Organizational Structure Key Indicator



#1 = Mission Statement Exists
#2 = Clear Lines of Authority

#3 = Statutory/Regulatory Tracking
#4 = High-level Representation

In general, all of the DRAs responding to the survey reported that they have developed organizational structures that enable them to effectively provide direction and authority to their environmental programs. All of the key indicators for "Best in Class" performance with respect to environmental organizational structure are reflected in the responses of each of the DRAs surveyed--none of the key indicators appeared with more frequency than the others.

3.2.2 Element 2: Management Commitment

"Best in Class" organizations possess and demonstrate a commitment to environmental excellence at each and every stage of the management hierarchy, and insist that the organization integrate environmental awareness and concerns into all relevant business operations.

Overall Findings:

In general, most of the DRAs responding to the survey reported a strong management commitment to environmental excellence. Performance in a few areas (i.e. resource availability, organizational decision making, and contractor/vendor selection) is unclear since the questionnaire did not solicit this information. Eight key indicators have been identified for "Best in Class" organizations in regard to management commitment.

1. Organizations make resources available to identify, develop, initiate, and transfer environmental improvement technologies and strategies between facilities.
2. Environmental concerns are integrated into organizational business planning.
3. Environmental considerations play a role in all key organizational decisions.
4. Management demonstrates a commitment to environmental protection that goes beyond environmental compliance.
5. A formal environmental risk management program has been instituted and is used to assess potential risks from all proposed and existing operations.
6. Capital budgeting evaluation criteria are used to allow environmental projects to compete fairly for investment resources.
7. Headquarters level policies exist that establish an environmental sense of direction for facility level operations.
8. Environmental criteria are used for the selection and management of contractors/vendors.

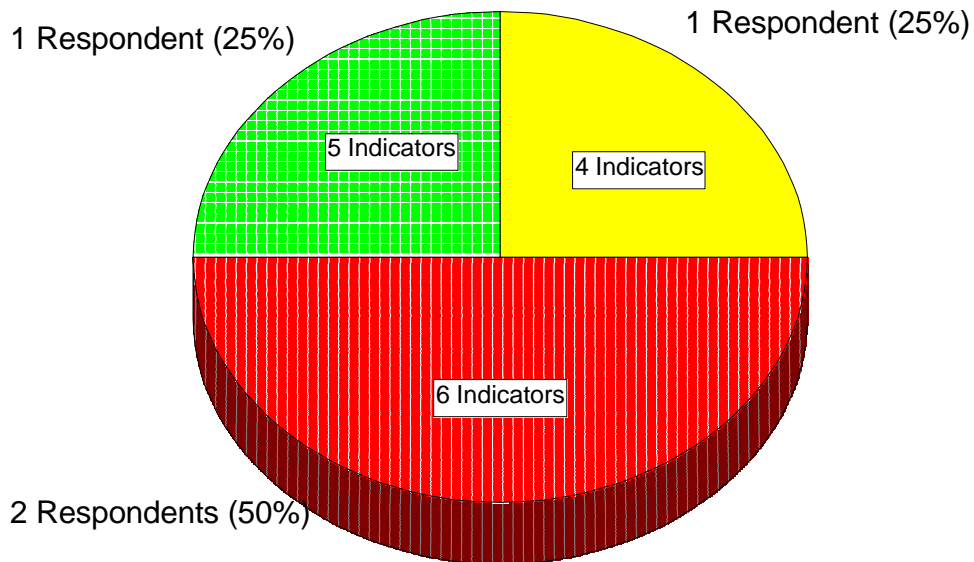
As an introductory overview, Exhibit 3-3 presents the total number of respondents reporting multiple key indicative behaviors.

The following discussion compares specific survey findings against each of the eight key indicators for "Best in Class" organizations with regard to management commitment.

Management Commitment Key Indicator:

1. Organizations make resources available to identify, develop, initiate, and transfer environmental improvement technologies and strategies between facilities.

Exhibit 3-3
Element 2: Management Commitment Key Indicators
Reported by Defense Related Agencies



Findings:

The survey did not ask any questions regarding the availability of resources for identifying, developing, initiating, and transferring environmental improvement technologies and strategies between facilities; hence, this key indicator for management commitment was not reported by any of the respondents.

Management Commitment Key Indicator:

2. Environmental concerns are integrated into organizational business planning.

Findings:

All of the DRAs surveyed integrate environmental concerns into their organizational business planning. Two of these respondents indicate that environmental planning is integrally entwined with their overall business planning process. The other two respondents state that environmental plans actually drive their long-term management plans. The survey respondents differ in their responses regarding the frequency of their planning activities. One states that environmental planning is a continuous improvement process, while the other three respondents state that environmental planning is conducted on an annual basis.

Management Commitment Key Indicator:

3. Environmental considerations play a role in all key organizational decisions.

Findings:

The survey did not ask any questions regarding the role of environmental considerations in making key organizational decisions ; hence, this key indicator for management commitment was not reported by any of the respondents. However, the DRAs surveyed do integrate environmental concerns into their organizational business planning, as discussed above.

Management Commitment Key Indicator:

4. Management demonstrates a commitment to environmental protection that goes beyond environmental compliance.

Findings:

Top management commitment to environmental programs was reported by all of the DRAs responding to the survey. Methods used by these agencies to show support for environmental programs include publishing annual environmental reports (including an Annual Environmental Report to Congress), holding semi-annual environmental briefings, presenting internal and external speeches, conducting conferences, and distributing environmental policy statements. One of these agencies reported that their Chief of Staff gives an address and presents environmental awards at the annual Earth Week celebration. In addition, senior management meetings are used by all of the

respondents as a forum for discussing environmental management issues. The reported frequency of these management meetings ranged from weekly to annually.

Management Commitment Key Indicator:

5. A formal environmental risk management program has been instituted and is used to assess potential risks from all proposed and existing operations.
-

Findings:

Only two of the DRAs responding to the survey reported that they use a formal risk management program that addresses environmental concerns; however, one agency did not respond to the survey questions on risk management and another indicated that they are currently developing a risk based management process. Two survey respondents indicate that operations are reviewed routinely by staff to minimize possible risk. One of these respondents describes their risk management program as using a team approach which includes representatives from safety, environmental, medical, police, fire department, and other functional areas to identify whether systems, equipment, and procedures are in place or are required to prevent or lessen a hazardous material release. In addition, all of the survey respondents answering the questions on risk management unanimously state that all new projects are reviewed for environmental impact issues.

Management Commitment Key Indicator:

6. Capital budgeting evaluation criteria are used to allow environmental projects to compete fairly for investment resources.
-

Findings:

The organization's budgeting process is affected by the results of the environmental planning process according to all DRAs surveyed. Three of these respondents reported that environmental planning is integrally related to their budgeting process; the fourth respondent states that environmental planning in the form of compliance with the NEPA process reveals costs which are included in budget submittals for proposed actions. Additionally, one respondent states that their agency publishes an agency "Instruction on Environmental Budgeting" to provide information required at installations to properly budget for pollution prevention requirements.

Management Commitment Key Indicator:

7. Headquarters level policies exist that establish an environmental sense of direction for facility level operations.

Findings:

In addition to having corporate environmental policy statements, all of the DRAs surveyed report having environmental goals and corporate policy statements to support their environmental programs. One respondent commented further that environmental policy statements at their agency are signed jointly by the Secretary and Chief of Staff, and that policies are formally supported by a policy directive entitled "Environmental Quality" and by agency instructions.

Management Commitment Key Indicator:

8. Environmental criteria are used for the selection and management of contractors/vendors.

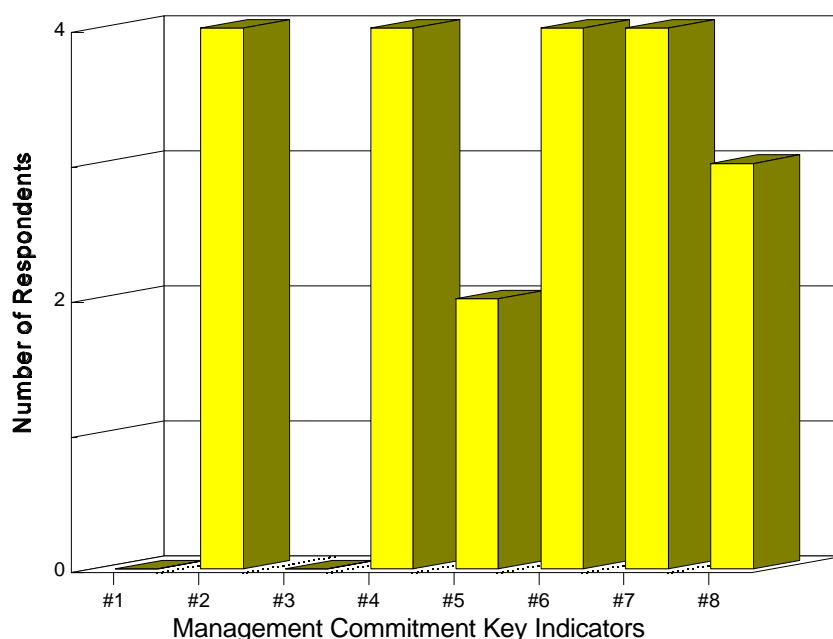
Findings:

Three of the DRAs respondents indicated that contractors are briefed on corporate environmental standards and policies; the fourth respondent states that it is dependent on the nature of the contract as to whether environmental policies are delineated to contractors. Those agencies giving positive responses reported using environmental documentation, contract requirements, and briefings during pre-startup meetings to inform contractors of their environmental policies and performance requirements. Furthermore, one respondent states that it is their agency's policy that "management and operating contractors will conduct their operations in an environmentally sound manner that limits the risks to the environment and protects public health." Thus, the survey responses show that the DRAs managed their contractors with environmental considerations in mind; however, the survey responses did not indicate whether environmental criteria are used for the selection of contractors/vendors.

Benchmark Element Summary:

This section summarizes the collective behavior of the four responding DRAs as evaluated against the key indicators for this Benchmark Element. Exhibit 3-4 presents the total number of respondents reporting each key indicative behavior.

Exhibit 3-4
Number of Defense Related Agencies Reporting Each
Management Commitment Key Indicator



(Indicators #1 and #3 were not addressed in the questionnaire.)

- | | |
|--|--|
| #1 = Resources Made Available | #5 = Formal Risk Management Program |
| #2 = Business Planning Integration | #6 = Budgeting Criteria Used |
| #3 = Role in all Organization Decisions | #7 = Headquarters Level Policies |
| #4 = Management Commitment beyond Compliance | #8 = Selection/Management of Contractors/Vendors |

In general, most of the DRAs responding to the survey reported strong management commitment to environmental excellence. Performance in a few areas is unclear, however, since the questionnaire did not solicit certain information. In particular, the questionnaire did not address resource availability for identifying, developing, initiating, and transferring environmental improvement technologies and strategies between facilities. The questionnaire also did not ask whether environmental considerations play a role in all key organizational decisions. Furthermore, it was not clear from the survey responses whether environmental criteria are used for the selection of contractors and vendors. However, four of the management commitment key indicators for "Best in Class" organizations were reflected in the responses of all the DRAs.

3.2.3 Element 3: Implementation

"Best in Class" organizations carry out their day to day business operations in ways that integrate environmental protection into their business conduct.

Overall Findings:

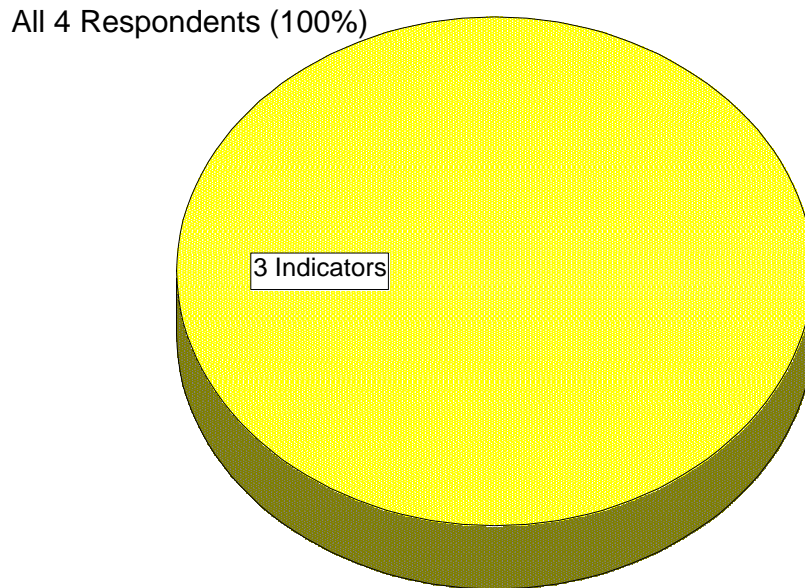
In general, all of the DRAs responding to the survey have established progressive goals and multi-media environmental programs to integrate environmental protection into their daily business conduct.

Three key indicators have been identified for "Best in Class" organizations in regard to environmental program implementation.

1. Short and medium range environmental performance goals are established for individual business operations and for the organization as a whole.
2. A wide range of potential environmental impacts are addressed through comprehensive multi-media environmental programs. These programs include, but are not limited to:
 - pollution prevention
 - recycling
 - reuse
 - control
 - compliance
 - affirmative procurement
 - energy conservation
 - emergency preparedness and response.
3. Formal guidance is developed and disseminated to help ensure organizational environmental excellence.

As an introductory overview, Exhibit 3-5 presents the total number of respondents reporting multiple key indicative behaviors.

Exhibit 3-5
Element 3: Implementation Key Indicators
Reported by Defense Related Agencies



The following discussion compares specific survey findings against each of the three key indicators for "Best in Class" organizations with regard to environmental program implementation.

Implementation Key Indicator:

1. Short- and medium-range environmental performance goals are established for individual business operations and for the organization as a whole.

Findings:

All of the DRAs respondents indicated that they have established aggressive waste and emission reduction goals beyond what is needed for compliance with existing regulations. In addition, all of the respondents report that they have established facility-specific pollution reduction goals. One of these respondents indicate that their strategic goal is to "prevent future pollution by reducing hazardous material use and releases of pollutants into the environment to as near zero as feasible."

Another respondent summarizes their goals as prioritizing risks, attaining public trust, and leading Federal agencies in environmental technology development.

Implementation Key Indicator:

2. A wide range of potential environmental impacts are addressed through comprehensive multi-media environmental programs. These programs include:

- pollution prevention
- recycling
- reuse
- control
- emergency preparedness and response
- compliance
- affirmative procurement
- energy conservation

Findings:

All of the DRAs surveyed have comprehensive multi-media environmental protection programs in place to implement their agency-wide environmental goals. In summary, all of the agencies report establishing and using the following types of implementation programs: emergency response plans; pollution prevention programs; recycling programs; waste minimization programs; surface water protection programs; groundwater monitoring programs; toxic chemical control programs (e.g. pesticides, PCBs, petroleum, and asbestos management); solid and hazardous waste management programs (e.g. waste source identification, characterization, minimization, and training); radioactive materials management programs; underground storage tank removal programs; and NEPA compliance programs. In addition to the above programs, three agencies indicate that they also have programs addressing air emissions control, and one agency reports that they have an energy conservation program in place.

Implementation Key Indicator:

3. Formal guidance is developed and disseminated to help ensure organizational environmental excellence.

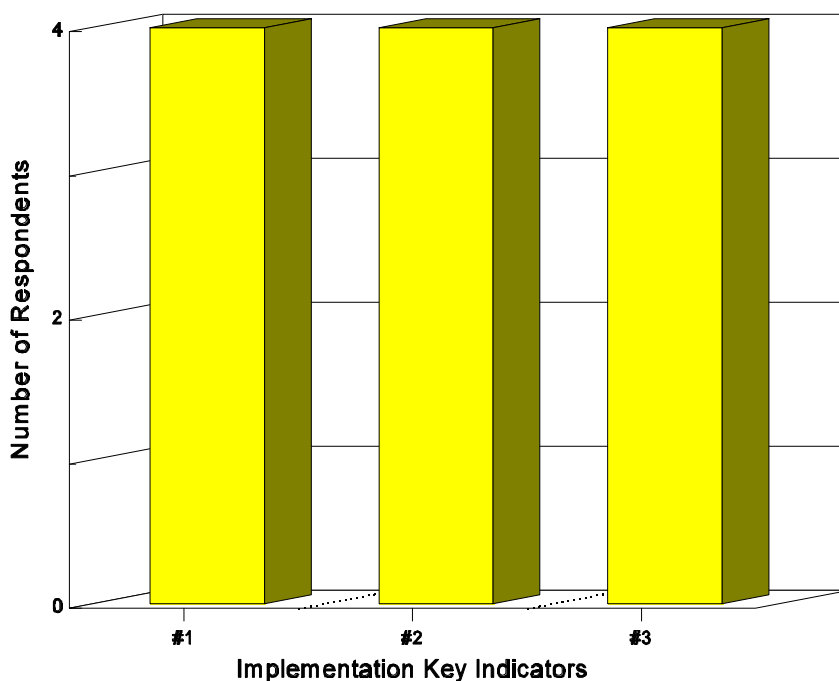
Findings:

All of the DRAs surveyed provide formal guidance to all departments within their organization in meeting environmental goals. These respondents indicated that guidance is provided through strategic plans, policy directives, instructions, regulations, and other directives.

Benchmark Element Summary:

This section summarizes the collective behavior of the four responding DRAs as evaluated against the key indicators for this Benchmark Element. Exhibit 3-6 presents the total number of respondents reporting each key indicative behavior.

Exhibit 3-6
Number of Defense Related Agencies Reporting Each Implementation Key Indicator



- #1 = Environmental Performance Goals Established
- #2 = Comprehensive Multi-media Environmental Programs Exist
- #3 = Formal Guidance Developed and Disseminated

In general, all of the DRAs responding to the survey have established progressive goals and multi-media environmental programs to integrate environmental protection into their daily business

conduct. All three of the implementation key indicators for "Best in Class" organizations were reflected in the responses of all the DRAs.

3.2.4 Element 4: Information Collection/Management/Follow-up

"Best in Class" organizations continually monitor environmental performance through the use of formal tracking and reporting mechanisms. Information acquired through these mechanisms is evaluated, disseminated, and used to continually improve environmental performance.

Overall Findings:

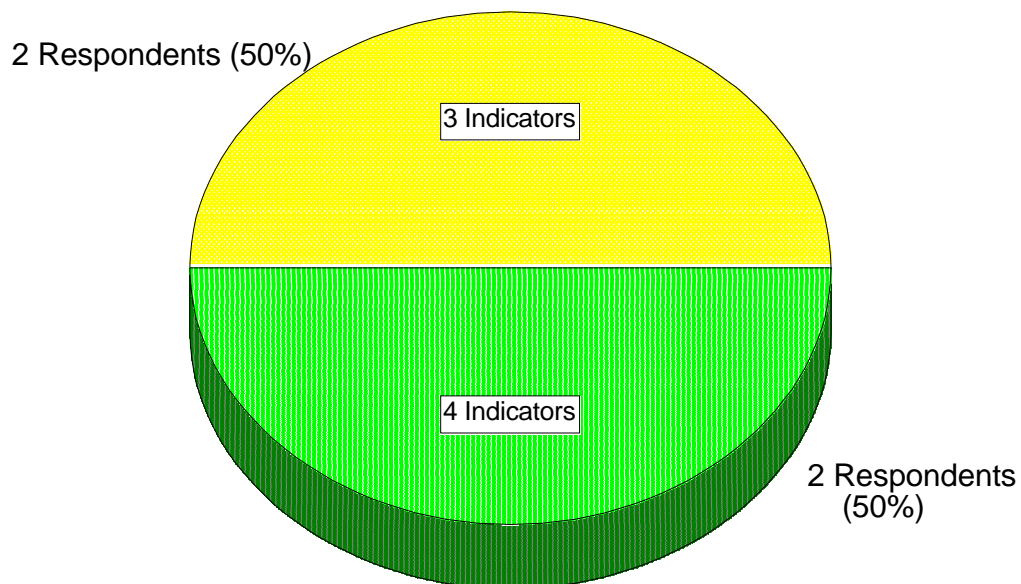
In general, all of the DRAs responding to the survey appeared to have strong programs for information collection, management, and follow-up. Performance in a few areas (i.e. establishing information baselines and "lessons learned" programs) is unclear since the survey did not request this information.

Six key indicators have been identified for "Best in Class" organizations in regard to environmental information collection/management/follow-up.

1. Information baselines have been established to identify, track and measure inputs (i.e., energy, water, materials), and wastes and emissions outputs.
2. Information management systems are used to track and evaluate environmental performance. These systems measure and verify data, evaluate the collected data, and identify improvement opportunities.
3. Monitoring results are documented and distributed in a timely manner to appropriate management representatives.
4. Business operations are modified in response to data findings to correct performance and meet environmental goals. Corrective actions are tracked and verified to ensure successful completion.
5. "Lessons learned" programs have been implemented to identify improvement opportunities.
6. Trends analyses are performed to identify root causes of environmental performance concerns.

As an introductory overview, Exhibit 3-7 presents the total number of respondents reporting multiple key indicative behaviors.

Exhibit 3-7
Element 4: Information Collection/Management/Follow-up
Key Indicators Reported by Defense Related Agencies



The following discussion compares specific survey findings against each of the six key indicators for "Best in Class" organizations with regard to environmental information collection/management/follow-up.

Information Collection/Management/Follow-up Key Indicator:

1. Information baselines have been established to identify, track and measure inputs (i.e., energy, water, materials) and wastes and emissions outputs.

Findings:

The survey did not ask any questions regarding information baselines; hence, this key indicator for information collection/management/follow-up was not reported by any of the respondents.

Information Collection/Management/Follow-up Key Indicator:

2. Information management systems are used to track and evaluate environmental performance. These systems measure and verify data, evaluate the collected data, and identify improvement opportunities.

Findings:

All four DRAs surveyed reported that they use information management systems to monitor and control environmental information. One of these respondents reported that their agency uses a central database system (Work Information Management System-Environmental Subsystem) for tracking and reporting information on all cleanup, compliance, EIAP, natural/cultural resources, and pollution prevention information. The other three respondents report that each facility/installation has developed and uses some type of environmental information management system, even though no standard department-level system exists. Three DRAs reported that they are currently developing automated chemical inventory and tracking systems needed for TRI reporting. Only one respondent indicated that their environmental database is integrated into a larger information management system using the Defense Environmental Corporate Information Management (DECIM) System; one other respondent stated that their agency is in the process of integrating their environmental system using DECIM. Three respondents indicated that they have, on a facility-by-facility basis, databases which track waste manifests and permitting records; the fourth respondent indicates that their agency tracks permits but does not track manifests. Two respondents reported that they have a *central* inventory which tracks and profiles waste streams and/or emissions; however, none have a main inventory which tracks regulated sites or materials.

Information Collection/Management/Follow-up Key Indicator:

3. Monitoring results are documented and distributed in a timely manner to appropriate management representatives.

Findings:

All of the DRAs surveyed report that they perform environmental audits and evaluations using a combination of internal staff and outside consultants. All of the DRAs perform formal "external" audits every three years, with informal "self-audits" being conducted by facilities on an annual basis. In addition, one of these respondents reported a third tier under which Inspector General environmental evaluations are conducted on an "as needed" basis, and another reported using a prioritization scheme to aid in selecting particular facilities to audit. This selection process is based

upon a series of criteria that include: nature of the operation; environmental organization and management; audit history; strength of internal programs; environmental performance indicators ; potential targets/receptors; and special issues.

At all of the DRAs surveyed, audit results are documented and distributed in a timely manner to appropriate management representatives; however, audit reporting methods varied among the agencies surveyed. One agency electronically transmits audit findings to Major Commands and Headquarters. Another agency requires auditors to conduct a close-out meeting with facility management at the end of an audit and to provide management with a draft findings report for comment before its final publication and distribution to the Assistant Secretary for Environment , Safety, and Health; the Program Secretarial Officer; and field managers. A third agency has auditors prepare a report for distribution to installations and Major Commands; the overall audit results are entered into a Headquarters-level database and documented in an annual report, as well as being presented in periodic briefings. The fourth agency reported that audit results are distributed to the Commanding Officer of the installation, the installation environmental staff, and the Chief of Operations.

Information Collection/Management/Follow-up Key Indicator:

4. Business operations are modified in response to data findings to correct performance and meet environmental goals. Corrective actions are tracked and verified to ensure successful completion.
-

Findings:

All of the DRAs surveyed state that environmental issues and deficiencies identified in audit reports are tracked by the installations to ensure corrective actions are taken on a timely basis. One of these respondents commented further that the development of installation corrective action plan(s) is required.

Information Collection/Management/Follow-up Key Indicator:

5. "Lessons learned" programs have been implemented to identify improvement opportunities.
-

Findings:

The survey did not ask any questions regarding "lessons learned" programs; hence, this key indicator for information collection/management/follow-up was not reported by any of the other Federal agency respondents.

Information Collection/Management/Follow-up Key Indicator:

6. Trends analyses are performed to identify root causes of environmental performance concerns.

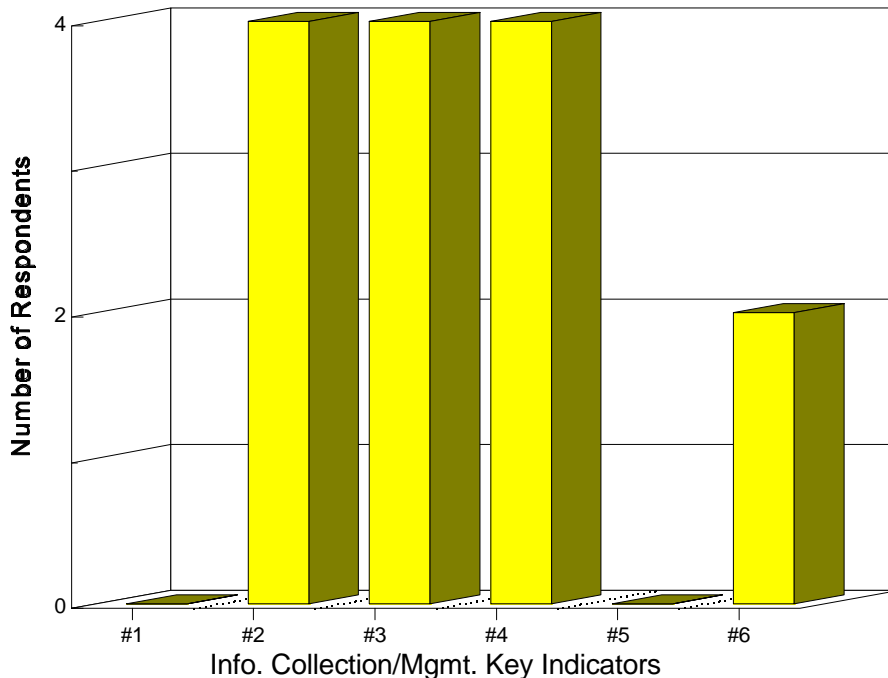
Findings:

Only two of the DRAs surveyed indicate that environmental audit report results are analyzed to identify root causes of environmental performance concerns. One of these respondents stated that their environmental division produces an annual report of evaluation results with corresponding analyses; the other respondent states that their agency's Major Commands conduct varying degrees of analysis on the audit data.

Benchmark Element Summary:

This section summarizes the collective behavior of the four responding DRAs as evaluated against the key indicators for this Benchmark Element. Exhibit 3-8 presents the total number of respondents reporting each key indicative behavior.

Exhibit 3-8 Number of Defense Related Agencies Reporting Each Information Collection/Management/Follow-up Key Indicat



(Indicators #1 and #5 were not addressed in the questionnaire.)

#1 = Information Baselines Established	#4 = Performance Corrected to Meet Goals
#2 = Information Management Systems Used	#5 = "Lessons Learned" Programs Established
#3 = Monitoring Results Documented	#6 = Trends Analyses Performed

In general, all of the DRAs responding to the survey appeared to have strong programs for information collection, management, and follow-up; although, there are a few areas where it is unclear whether their programs include components that address specific key indicators. Specifically, the survey did not ask whether formal environmental baselines that measure the material inputs and environmental releases of all current operations have been developed. Similarly, no questions were asked in the survey regarding "lessons learned" programs. Three of the information collection/management/follow-up key indicators for "Best in Class" organizations were reflected in the responses of all the DRAs.

3.2.5 Element 5: Internal and External Communication

"Best in Class" organizations foster and use formal and informal channels to communicate environmental commitment and performance information. Employee communication is encouraged to develop cooperation and commitment, including bringing together employees from different disciplines.

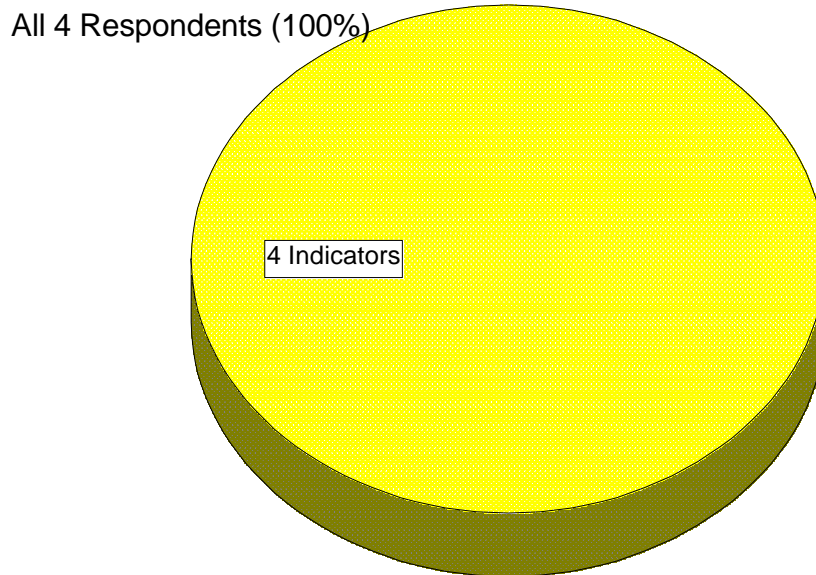
Overall Findings:

In general, all of the DRAs responding to the survey have strong internal and external communication channels for soliciting and disseminating environmental information. However, performance in a few areas (i.e. communicating successful strategies and cooperation with external oversight organizations) is unclear since the survey did not request this information. Six key indicators have been identified for "Best in Class" organizations in regard to internal and external communication.

1. Channels exist for employees to anonymously communicate environmental performance concerns without retribution.
2. Employee suggestions are actively solicited and any concerns raised are addressed and responses documented.
3. Successful environmental programs and strategies are communicated throughout the organization.
4. Environmental awareness and performance information is communicated through the use of employee newsletters, bulletin boards, electronic mail, etc.
5. Full and open cooperation with external oversight organizations exists.
6. Input regarding environmental performance and opportunity identification is actively solicited from external parties (e.g., customers, neighbors, regulators, general public).

As an introductory overview, Exhibit 3-9 presents the total number of respondents reporting multiple key indicative behaviors.

Exhibit 3-9
Element 5: Internal and External Communication
Key Indicators Reported by Defense Related Agencies



The following discussion compares specific survey findings against each of the six key indicators for "Best in Class" organizations with regard to internal and external communication.

Internal and External Communication Key Indicator:

1. Channels exist for employees to anonymously communicate environmental performance concerns without retribution.

Findings:

All of the DRAs surveyed have a program in place which allows employees to raise environmental concerns anonymously. All have programs providing for anonymous written comments; furthermore, three of these agencies have established hotlines for employee concerns. The same three agencies indicated that employees also have access to the Inspector General complaint system. One agency commented further that steps are being taken to promote the whistleblower effort within the Department to stress "zero tolerance" to reprisal. Another agency noted that all employee concerns are submitted to the appropriate department for investigation within ten days of

receipt, and an Employee Concerns Manager and an Employee Concerns Review Panel ensure that appropriate actions are taken in accordance with established schedules.

Internal and External Communication Key Indicator:

2. Employee suggestions are actively solicited and any concerns raised are addressed and responses documented.

Findings:

All of the DRAs surveyed have a program in place which solicits and responds to employee suggestions (see discussion immediately above).

Internal and External Communication Key Indicator:

3. Successful environmental programs and strategies are communicated throughout the organization.

Findings:

The survey did not ask any questions regarding communication of successful programs and strategies; hence, this key indicator for internal and external communication was not reported by any of the respondents.

Internal and External Communication Key Indicator:

4. Environmental awareness and performance information is communicated through the use of employee newsletters, bulletin boards, electronic mail, etc.

Findings:

All of the DRAs responding to the survey reported using a wide variety of methods to communicate environmental awareness and performance information internally to their employees. The methods used include memos, letters, guidance documents, department-wide responses to rulemakings, regulatory bulletins, information briefs, formal directives, training, meetings, distributed databases, electronic mail, telephones, telefaxes, conferences, and articles in internal publications.

Internal and External Communication Key Indicator:

5. Full and open cooperation with external oversight organizations exists.

Findings:

The survey did not ask any questions regarding cooperation with external oversight organizations; hence, this key indicator for internal and external communication was not reported by any of the DRAs respondents.

Internal and External Communication Key Indicator:

6. Input regarding environmental performance and opportunity identification is actively solicited from external parties (e.g., customers, neighbors, regulators, general public).

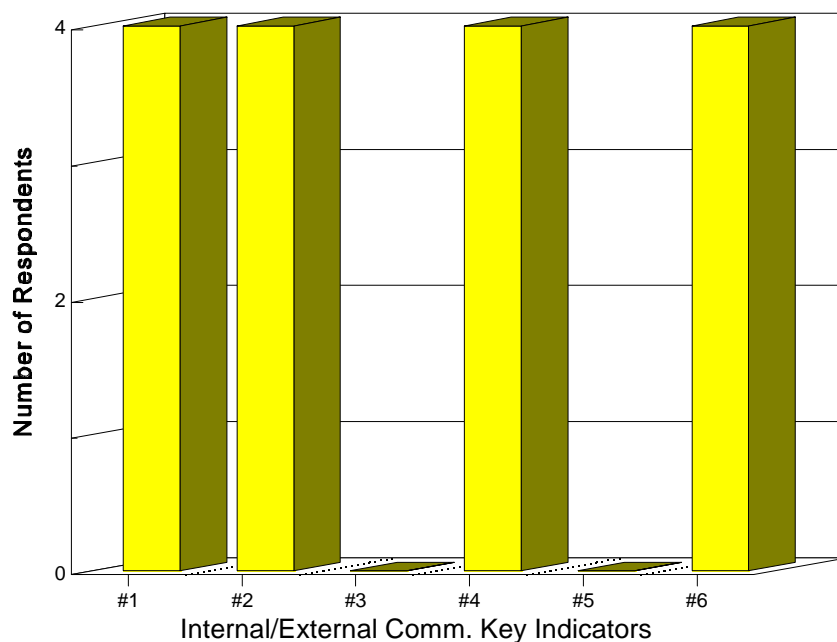
Findings:

All of the DRAs respondents indicated that they have formal outreach programs to share environmental information with the community, neighbors, media, and customers. Communication methods employed include Resident Advisory Boards, public speakers, biweekly dissemination of information (hardcopy and electronic mail), quarterly Public Participation Meetings, news releases, bulletin boards, newsletters, administrative records, environmental reports, advertisements, public/private partnerships, and consensus statements. One respondent commented further on their program, indicating that they have instituted a public participation training program designed to train Headquarters staff and field managers in conducting public participation programs, and that they have established an Office of Public Accountability and an Office of Program Information that is responsible for public participation coordination.

Benchmark Element Summary:

This section summarizes the collective behavior of the four responding DRAs as evaluated against the key indicators for this Benchmark Element. Exhibit 3-10 presents the total number of respondents reporting each key indicative behavior.

Exhibit 3-10
Number of Defense Related Agencies Reporting Each Internal/External Communication Key Indicator



(Indicators #3 and #5 were not addressed in the questionnaire.)

- | | |
|--|--|
| #1 = Channels Exist for Reporting Environmental Concerns | #4 = Environmental Awareness Communicated |
| #2 = Employee Suggestions Solicited | #5 = Cooperation with External Oversight Organizations |
| #3 = Successful Programs/Strategies Communicated | #6 = Input Solicited from External Parties |

In general, all of the DRAs responding to the survey have strong internal and external communication channels for soliciting and disseminating environmental information. However, performance in a few areas (i.e. communicating successful strategies and cooperation with external oversight organizations) is unclear since the survey did not request this information. Four of the internal/external communication key indicators for "Best in Class" organizations were reflected in the responses of all DRAs.

3.2.6 Element 6: Personnel

"Best in Class" organizations ensure that personnel are capable of developing and implementing environmental initiatives. Employees are hired, trained, and deployed in ways that ensure that staff understand their environmental responsibilities and receive the training and support necessary to achieve environmental excellence.

Overall Findings:

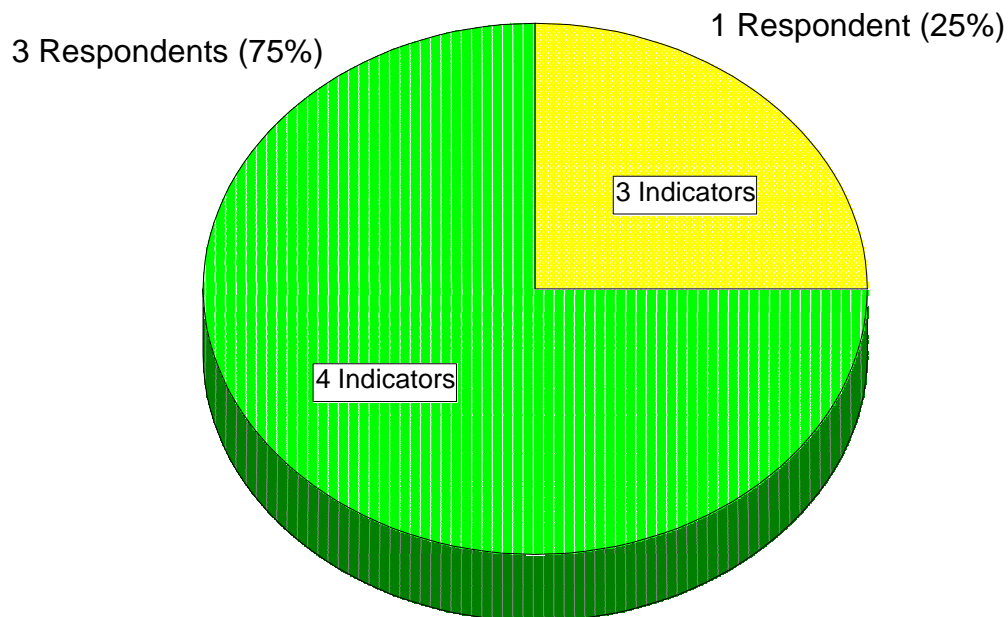
In general, all of the DRAs responding to the survey have strong employee hiring, training, and incentive programs to ensure that sufficient environmental personnel are available to develop and implement environmental initiatives.

Four key indicators have been identified for "Best in Class" organizations in regard to personnel.

1. Sufficient qualified staff are hired, deployed, and trained to ensure that all aspects of the business operation are executed in accordance with the organization's environmental commitment.
2. All employees receive initial and ongoing training to ensure that they a) understand the environmental requirements of their job, and b) have the skills necessary to execute their job responsibilities in an environmentally sound manner.
3. Environmental excellence is the explicit responsibility of every employee throughout the organization, as demonstrated by the presence of environmental criteria in each employee's job description/performance evaluation, or by other means.
4. Exemplary environmental efforts are recognized and/or rewarded.

As an introductory overview, Exhibit 3-11 presents the total number of respondents reporting multiple key indicative behaviors.

Exhibit 3-11
Element 6: Personnel Key Indicators
Reported by Defense Related Agencies



The following discussion compares specific survey findings against each of the four key indicators for "Best in Class" organizations with regard to personnel.

Personnel Key Indicator:

1. Sufficient qualified staff are hired, deployed, and trained to ensure that all aspects of the business operation are executed in accordance with the organization's environmental commitment.

Findings:

The current number of environmental staff reported to be employed by the DRAs surveyed varies from 1,000 to 3,018 persons. Whether this level of staffing is sufficient is not indicated by the survey responses. All of the DRAs surveyed employ some type of forecasting method to determine future environmental staffing needs, based upon departmental priorities or manpower staffing studies. All of the agencies specify qualifications required for entry-level and senior-level environmental

positions (typically undergraduate or graduate degrees in science or engineering and appropriate management experience).

Personnel Key Indicator:

2. All employees receive initial and ongoing training to ensure that they 1) understand the environmental requirements of their job, and 2) have the skills necessary to execute their job responsibilities in an environmentally sound manner.

Findings:

All of the DRAs surveyed stated that they provide environmental training to *all* their employees. Two agencies state that they provide initial environmental training as part of employee orientation, and all of the agencies provide ongoing environmental training on a mandatory basis. One of these agencies commented further that they work cooperatively with EPA and other outside entities to offer joint training opportunities and to make outside environmental training available to employees. The methods for assessing training needs varied among the respondents. Two agencies state that training requirements are evaluated using a needs survey; two other agencies indicate that they have developed a Master Training Plan to identify who needs training and what type of training they require. All of the respondents indicated that emergency response procedures are communicated to employees through routine training sessions and drills.

Personnel Key Indicator:

3. Environmental excellence is the explicit responsibility of every employee throughout the organization, as demonstrated by the presence of environmental criteria in each employee's job description/performance evaluation, or by other means.

Findings:

Three of the DRAs responding to the survey indicated that staff who have some environmental duties, even though not their primary duties, have environmental responsibilities documented (usually in their job descriptions). In addition, three of the DRAs responding to the survey indicated that all employees who are responsible for environmental management are held

accountable for their performance. These agencies indicated that employees are held accountable for their performance through environmental criteria included in their performance evaluations.

Personnel Key Indicator:

4. Exemplary environmental efforts are recognized and/or rewarded.
-

Findings:

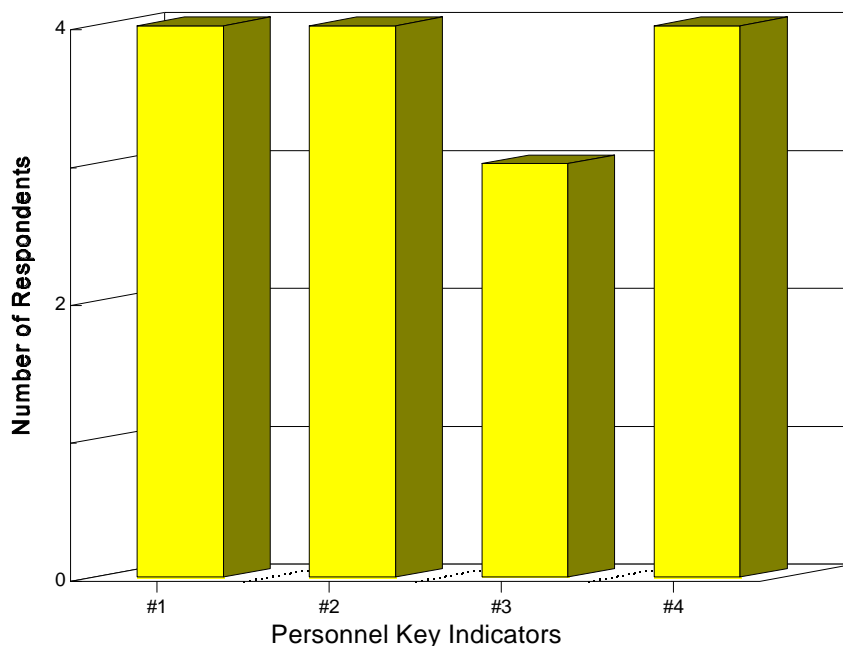
All of the DRAs surveyed recognized and/or rewarded their employees for exemplary environmental efforts. Each agency has some type of formal program that consists of a variety of awards and incentives. Three of these agencies present awards for individual and team environmental excellence in various areas, including environmental quality, environmental restoration, environmental compliance, pollution prevention, environmental planning, and natural/cultural resource management. The major form of recognition reported is public and peer recognition, rather than monetary rewards (which is reported by only one respondent).

Benchmark Element Summary:

This section summarizes the collective behavior of the four responding DRAs as evaluated against the key indicators for this Benchmark Element. Exhibit 3-12 presents the total number of respondents reporting each key indicative behavior.

Exhibit 3-12

Number of Defense Related Agencies Reporting Each Personnel Key Indicator



- #1 = Sufficient Qualified Staff Hired, Deployed, and Trained
- #2 = Initial and Ongoing Training for all Employees
- #3 = Environmental Excellence is the Responsibility of Every Employee
- #4 = Exemplary Efforts Recognized/Rewarded

In general, all of the DRAs responding to the survey have strong employee hiring, training, and incentive programs to ensure that sufficient environmental personnel are available to develop and implement environmental initiatives. Three out of four of the personnel key indicators for "Best in Class" performance were reflected in the responses of all the DRAs.

CHAPTER 4: Corporate Participants

4.1 Data Sources

This chapter summarizes the responses received from three private corporations to a January 1994 question survey. In general, the survey focused on eight topic areas: organizational structure; environmental commitment; environmental protection program; formality of environmental program; internal and external communication; staff resources, training, and development; evaluation, reporting, and corrective action; and environmental planning and risk management. A copy of the questionnaire is included as Appendix A, Exhibit A-2, of this document.

Responses to the questionnaire were received from the following three private corporations:

- Xerox Corporation
- Chevron Corporation
- 3M

4.2 Performance Measured Against Benchmark Elements

4.2.1 Element 1: Organizational Structure

"Best in Class" organizations have an organizational structure that gives authority, input, and voice to environmental performance.

Overall Findings:

In general, all of the private organizations responding to the survey have developed organizational structures that enable them to effectively provide direction and authority to their environmental programs, performing well against the "Best in Class" measurement.

Four key indicators have been identified for "Best in Class" organizations in regard to organizational structure.

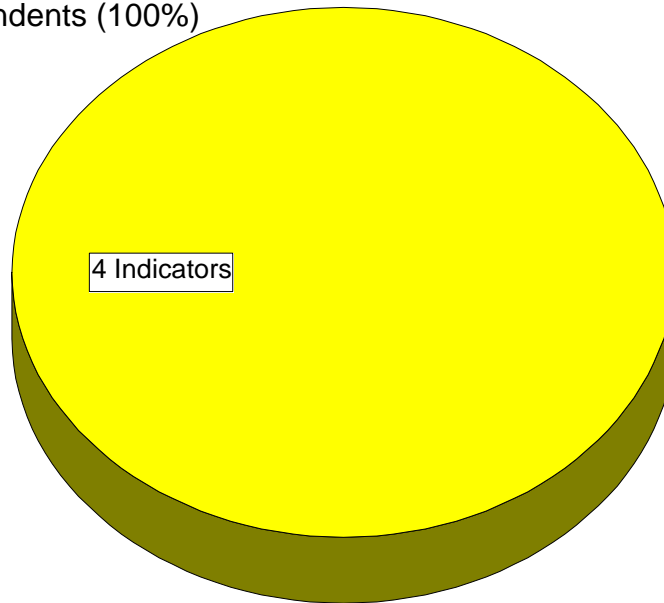
1. Organizational mission statement exists that sets forth environmental business focus, going beyond environmental compliance.
2. Clear lines of authority, responsibility, and accountability are established for environmental functions.
3. Formal systems for statutory and regulatory tracking/monitoring exist and access to legal resources is readily available.

4. Environmental management functions are represented at the high(est) levels of the organization.

As an introductory overview, Exhibit 4-1 below presents the total number of respondents reporting multiple key indicative behaviors.

Exhibit 4-1
Element 1: Organizational Structure Key Indicators
Reported by Corporate Participants

All 3 Respondents (100%)



The following discussion compares specific survey findings against each of the four key indicators representing "Best in Class" activities with regard to organizational structure.

Organizational Structure Key Indicator:

1. Organizational mission statement exists that sets forth environmental business focus, going beyond environmental compliance.

Findings:

All of the CPs surveyed have a corporate environmental policy statement presented either in their organization's mission statement or in a formal policy letter. One of the respondent corporations has a particularly aggressive environmental policy statement, "It is our policy to conduct business in a socially responsible and ethical manner that protects safety, health and the environment. The goal is to be a leader within industry by emphasizing innovation and encouraging creative solutions, both of which will improve our competitive position."

Organizational Structure Key Indicator:

2. Clear lines of authority, responsibility, and accountability are established for environmental functions.

Findings:

All of the CPs surveyed reported that they have organizational charts that illustrate clear lines of authority for the company's environmental management structure. Two of the corporations have a centralized environmental organization as a department in the corporate structure. One of these corporations shows an organizational chart for their centralized department "Corporate Strategic Services, Environment, Health and Safety" which is headed by a director and has thirteen environmental subdivisions under it. The corporate environmental group handles the majority of environmental issues for all of the operating units and is responsible for ensuring that all facilities and operations are in compliance with all environmental requirements.

In general, the CPs as a group appeared to consciously and clearly define environmental responsibilities and communicate them to their employees. All of the corporations use employee job descriptions as a medium for documenting the environmental responsibilities of their employees. In addition, responsibilities are communicated to employees through a number of other methods, including formal presentations, training sessions, internal correspondence, and specifications in operating procedures. One respondent emphasized its structure of total corporate responsibility, stating that it communicates often the message that "all employees have responsibility for the waste that they are generating and the responsibility to take action to reduce that environmental waste."

Organizational Structure Key Indicator:

3. Formal systems for statutory and regulatory tracking/monitoring exist and access to legal resources is readily available.
-

Findings:

Statutory and regulatory tracking/monitoring is performed by all of the CPs surveyed according to the questionnaire responses. The methods used to track regulatory developments vary among the survey respondents and include: subscriptions to periodicals (*BNA Environmental Reporter*, *Inside EPA*, *Federal Register*), regulatory tracking services, and personal contact with government regulators. In addition, all of the corporations appear to have ready access to legal resources for interpreting new environmental regulations. The entire group of respondents indicate that attorneys in their Office of General Counsel are available to assist in interpreting environmental regulations; although one respondent indicate that primary responsibility for this function belongs with the environmental engineers.

Organizational Structure Key Indicator:

4. Environmental management functions are represented at the high(est) levels of the organization.
-

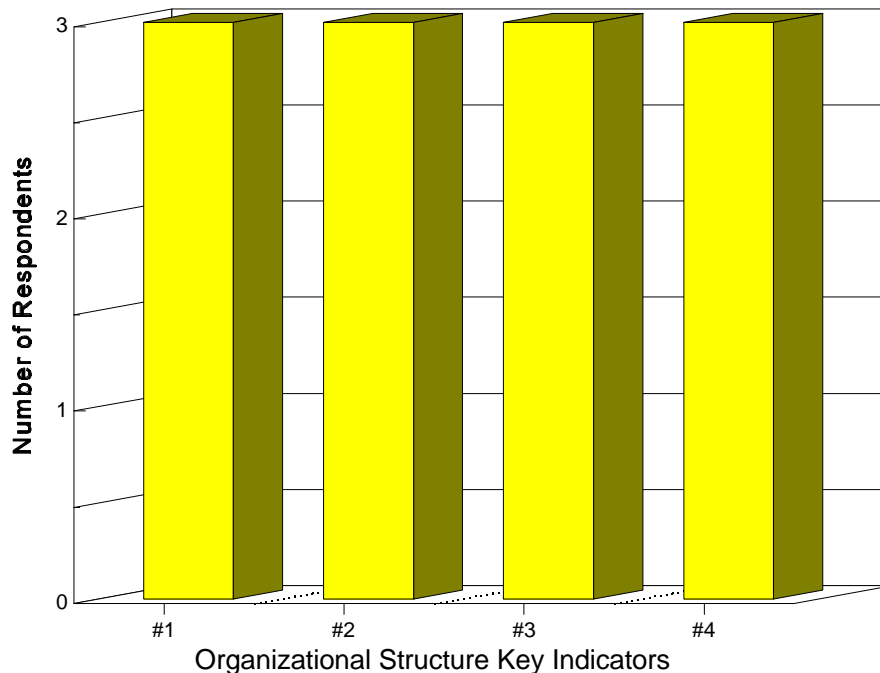
Findings:

All of the CPs surveyed reported that they perform well against the key indicator of having environmental management functions represented at high levels of their organization. The highest level of authority with direct environmental management responsibilities reported by two of the corporations surveyed is a corporate vice president (e.g., Corporate Vice President of Environmental Affairs, Vice President of Environmental Engineering and Pollution Control), who reports directly to the Chief Executive Officer and Chairman of the Board. Most respondents indicate that environmental policy and standards are established by the vice president of the organizations and technical support and environmental oversight of line organizations is performed by managers. Compliance with Federal and state environmental laws and regulations is under the authority of line managers and engineers.

Benchmark Element Summary:

This section summarizes the collective behavior of the three responding Cps as evaluated against the key indicators for this Benchmark Element. Exhibit 4-2 below presents the total number of respondents reporting each key indicative behavior.

Exhibit 4-2
Number of Private Corporations Reporting Each Organizational Structure Key Indicator



#1 = Mission Statement Exists
#2 = Clear Lines of Authority

#3 = Statutory/Regulatory Tracking
#4 = High-level Representation

In general, all of the private organizations responding to the survey report that they have developed organizational structures that enable them to effectively provide direction and authority to their environmental programs. All of the key indicators for "Best in Class" performance with respect to environmental organizational structure are reflected in the responses of each of the Corporate Participants surveyed--none of the key indicators appeared with more frequency than the others.

4.2.2 Element 2: Management Commitment

Best in Class" organizations possess and demonstrate a commitment to environmental excellence at each and every stage of the management hierarchy, and insist that the organization integrate environmental awareness and concerns into all relevant business operations.

Overall Findings:

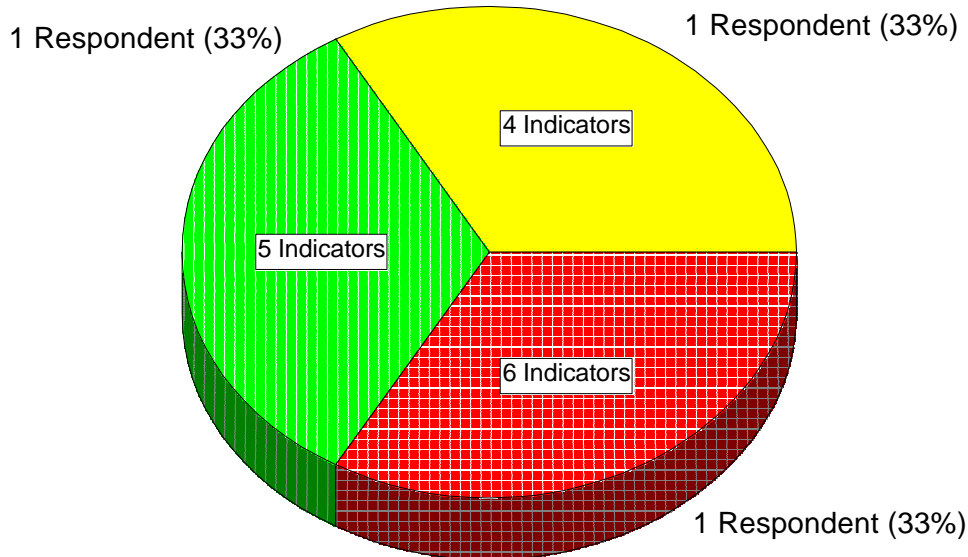
In general, most of the private organizations responding to the survey report a strong management commitment to environmental excellence. Performance in a few areas (i.e. resource availability, organizational decision making, and contractor/vendor selection) is unclear since the questionnaire did not solicit this information.

Eight key indicators have been identified for "Best in Class" organizations in regard to management commitment.

1. Organizations make resources available to identify, develop, initiate, and transfer environmental improvement technologies and strategies between facilities.
2. Environmental concerns are integrated into organizational business planning.
3. Environmental considerations play a role in all key organizational decisions.
4. Management demonstrates a commitment to environmental protection that goes beyond environmental compliance.
5. A formal environmental risk management program has been instituted and is used to assess potential risks from all proposed and existing operations.
6. Capital budgeting evaluation criteria are used to allow environmental projects to compete fairly for investment resources.
7. Headquarters level policies exist that establish an environmental sense of direction for facility level operations.
8. Environmental criteria are used for the selection and management of contractors/vendors.

As an introductory overview, Exhibit 4-3 presents the total number of respondents reporting multiple key indicative behaviors.

Exhibit 4-3
Element 2: Management Commitment Key Indicators
Reported by Corporate Participants



The following discussion compares specific survey findings against each of the eight key indicators for "Best in Class" organizations with regard to management commitment.

Management Commitment Key Indicator:

1. Organizations make resources available to identify, develop, initiate, and transfer environmental improvement technologies and strategies between facilities.

Findings:

The questionnaire distributed to CPs did not include any questions that specifically address this key indicator.

Management Commitment Key Indicator:

2. Environmental concerns are integrated into organizational business planning.
-

Findings:

All of the CPs surveyed integrate environmental concerns into their organizational business planning. Two of the respondents indicated that environmental planning is integrally entwined with their overall business planning process (e.g., "there are some instances in which the management plan drives the environmental plan, while there are other situations in which the environmental plan will be a driver for the management plan"). The third respondent stated that environmental planning is incorporated into their long-term business plan. The survey respondents differed in their responses regarding the frequency of their planning activities. One stated that environmental planning is a continuous improvement process based on environmental management plans which are reviewed and updated quarterly. The other two respondents stated that environmental planning is conducted on an annual basis; however, one of the corporations is changing to a three-year planning period beginning in 1994.

Management Commitment Key Indicator:

3. Environmental considerations play a role in all key organizational decisions.
-

Findings:

The questionnaire distributed to CPs did not include any questions that specifically address this key indicator. However, the CPs surveyed do integrate environmental concerns into their organizational business planning, as discussed above.

Management Commitment Key Indicator:

4. Management demonstrates a commitment to environmental protection that goes beyond environmental compliance.
-

Findings:

Two of the three respondents indicated that corporate management is committed to environmental protection that goes beyond environmental compliance. These corporations have established aggressive waste and emission reduction goals beyond what is needed for compliance with existing regulations. One respondent indicated that senior management has established a goal for all its facilities to be "waste-free" by 1997, which includes a target of "zero" emissions and "zero" solid waste being sent to landfills. To support this commitment, guidance is provided by environmental staff and management has established measurement criteria. The second respondent indicated that corporate management is committed to achieving the following goals: a 35% reduction in generation of waste by 1995, a 70% reduction in air emissions by 1995, a 50% reduction in generation of waste by 2000, and a 90% reduction of all environmental releases by 2000.

Top management commitment to environmental programs is reported by all of the CPs responding to the survey. Methods used by these corporations to show support for environmental programs include publishing environmental reports, presenting internal and external speeches, incorporating environmental issues into their corporate annual reports, and establishing corporate environmental policy. One corporation even distributes video tapes to its employees that present the Chief Executive Officer and his position on environmental issues. In addition, senior management meetings are used by all of the respondents as a forum for discussing environmental management issues. One respondent indicated that environmental issues are discussed "routinely at monthly senior management meetings, and quarterly at Environmental Leadership Steering Committee meetings with senior management representation from all functions worldwide."

Management Commitment Key Indicator:

5. A formal environmental risk management program has been instituted and is used to assess potential risks from all proposed and existing operations.

Findings:

Only one of the CPs responding to the survey reported that they use a formal risk management program that addresses environmental concerns. A second survey respondent states that formal risk management programs are being developed by the business as a policy requirement; however, the current focus of the programs is on process safety. Two survey respondents indicated that operations are reviewed routinely by staff to minimize possible risk as part of safety/environmental assessments of operational plans, processes, and products. In addition, the survey respondents unanimously stated that all new projects are reviewed for environmental impact

issues. These reviews are typically conducted by the designing engineers and provide opportunity for critique and design improvement. One respondent corporation has a "design for the environment" program for products and processes that is based on full life cycle assessments.

Management Commitment Key Indicator:

6. Capital budgeting evaluation criteria are used to allow environmental projects to compete fairly for investment resources.
-

Findings:

The organization's budgeting process is affected by the results of the environmental planning process according to all three of the CPs surveyed. One respondent stated that the high cost of environmental compliance (e.g. \$600 million in 1993) is factored into the organization's budgeting process. Another respondent indicated that their organization functions on a capital forecast system rather than a total budgeting process. Under the capital forecast system, all environmental compliance requirements are treated as an absolute mandatory expenditure and are funded regardless of whether they were in budgeting procedures or not; however, any voluntary pollution prevention initiatives must compete with all other expenditures in the capital forecast.

Management Commitment Key Indicator:

7. Headquarters level policies exist that establish an environmental sense of direction for facility level operations.
-

Findings:

According to the questionnaire responses, all of the CPs surveyed possessed environmental goals and policies at the department or operating unit level in addition to having corporate environmental policy statements. With the corporate policy statement serving as the foundation, individual manufacturing plants and operating units develop their own goals and may include an environmental statement in their vision, mission, or objectives.

Management Commitment Key Indicator:

8. Environmental criteria are used for the selection and management of contractors/vendors.

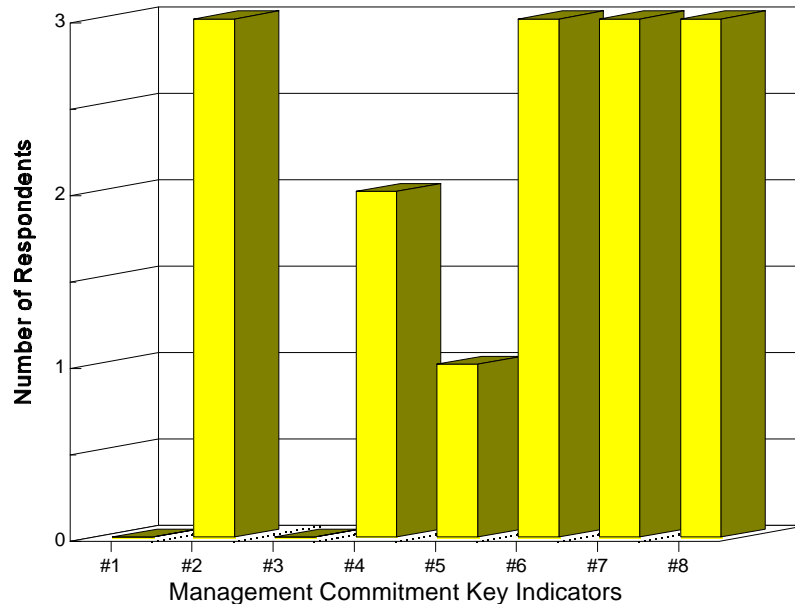
Findings:

All of the CPs respondents indicated that contractors are briefed on corporate environmental standards and policies. One corporation conducts contractor safety training in which environmental procedures are discussed. Another corporation thoroughly briefs contractors regarding company environmental standards and policies and requires them to adhere to the same high standards of environmental performance as are expected of internal staff. Thus, the survey responses showed that the corporations manage their contractors with environmental considerations in mind; however, the survey responses did not indicate whether environmental criteria are used for the selection of contractors/vendors.

Benchmark Element Summary:

This section summarizes the collective behavior of the three responding CPs as evaluated against the key indicators for this Benchmark Element. Exhibit 4-4 presents the total number of respondents reporting each key indicative behavior.

Exhibit 4-4 Number of Private Corporations Reporting Each Management Commitment Key Indicator



(Indicators #1 and #3 were not addressed in the questionnaire.)

- | | |
|--|--|
| #1 = Resources Made Available | #5 = Formal Risk Management Program |
| #2 = Business Planning Integration | #6 = Budgeting Criteria Used |
| #3 = Role in all Organization Decisions | #7 = Headquarters Level Policies |
| #4 = Management Commitment beyond Compliance | #8 = Selection/Management of Contractors/Vendors |

In general, most of the CPs responding to the survey reported strong management commitment to environmental excellence. Performance in a few areas is unclear, however, since the questionnaire did not solicit certain information. In particular, the questionnaire did not address resource availability for identifying, developing, initiating, and transferring environmental improvement technologies and strategies between facilities. The questionnaire also did not ask whether environmental considerations play a role in all key organizational decisions. Furthermore, it was not clear from the survey responses whether environmental criteria are used for the selection of contractors and vendors. However, four of the management commitment key indicators for "Best in Class" organizations were reflected in the responses of all the CPs.

4.2.3 Element 3: Implementation

"Best in Class" organizations carry out their day to day business operations in ways that integrate environmental protection into their business conduct.

Overall Findings:

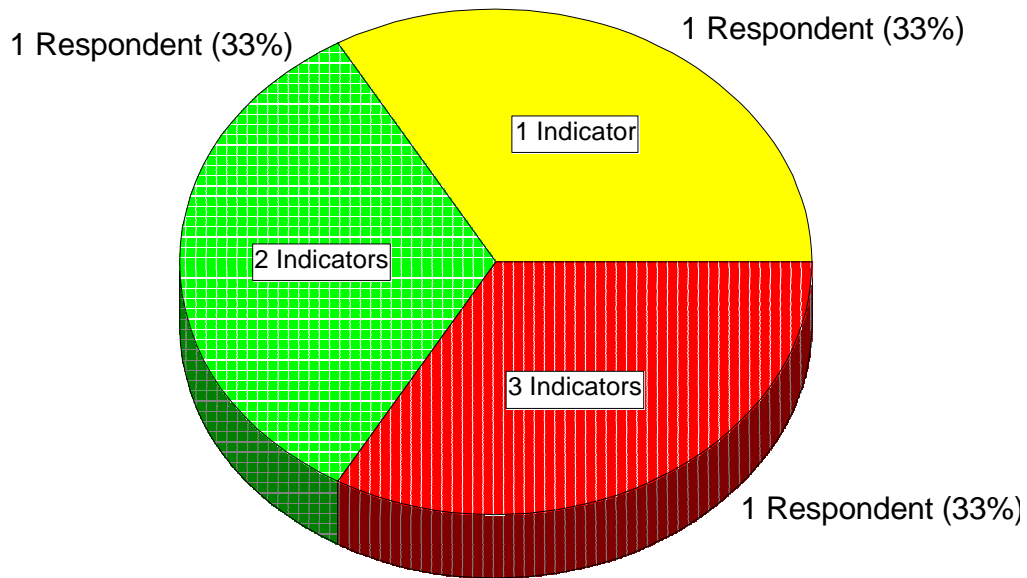
In general, most of the private organizations responding to the survey have established progressive goals and multi-media environmental programs to integrate environmental protection into their daily business conduct.

Three key indicators have been identified for "Best in Class" organizations in regard to environmental program implementation.

1. Short and medium range environmental performance goals are established for individual business operations and for the organization as a whole.
2. A wide range of potential environmental impacts are addressed through comprehensive multi-media environmental programs. These programs include, but are not limited to:
 - pollution prevention
 - recycling
 - reuse
 - control
 - compliance
 - affirmative procurement
 - energy conservation
 - emergency preparedness and response.
3. Formal guidance is developed and disseminated to help ensure organizational environmental excellence.

As an introductory overview, Exhibit 4-5 presents the total number of respondents reporting multiple key indicative behaviors.

Exhibit 4-5
Element 3: Implementation Key Indicators
Reported by Corporate Participants



The following discussion compares specific survey findings against each of the three key indicators for "Best in Class" organizations with regard to environmental program implementation.

Implementation Key Indicators:

1. Short- and medium-range environmental performance goals are established for individual business operations and for the organization as a whole.

Findings:

Two of the three respondents indicated that their corporations have established aggressive waste and emission reduction goals beyond what is needed for compliance with existing regulations. One respondent indicates that senior management has established a goal for all its facilities to be "waste-free" by 1997, which includes a target of "zero" emissions and "zero" solid waste being sent to landfills. To support this commitment, guidance is provided by environmental staff and management has established measurement criteria. The second respondent indicates that several short and medium range performance goals have been established: a 35% reduction in generation of waste by 1995, a 70% reduction in air emissions by 1995, a 50% reduction in generation of waste by 2000, and a 90% reduction of all environmental releases by 2000.

Implementation Key Indicator:

2. A wide range of potential environmental impacts are addressed through comprehensive multi-media environmental programs. These programs include:

- pollution prevention
- recycling
- reuse
- control
- emergency preparedness and response
- compliance
- affirmative procurement
- energy conservation

Findings:

All of the CPs surveyed reported the presence of comprehensive multi-media environmental protection programs in place to implement their corporate environmental goals. In summary, all of the corporations have established the following types of implementation programs: emergency response plans, pollution prevention programs, recycling programs, air emissions control, surface water protection programs, groundwater monitoring programs, toxic chemical control programs (e.g. pesticides, PCBs, petroleum, and asbestos management), solid and hazardous waste management programs, underground storage tank removal programs, and NEPA compliance programs. In addition, one corporation indicates that they also have programs addressing radioactive materials management and energy conservation.

Implementation Key Indicator:

3. Formal guidance is developed and disseminated to help ensure organizational environmental excellence.

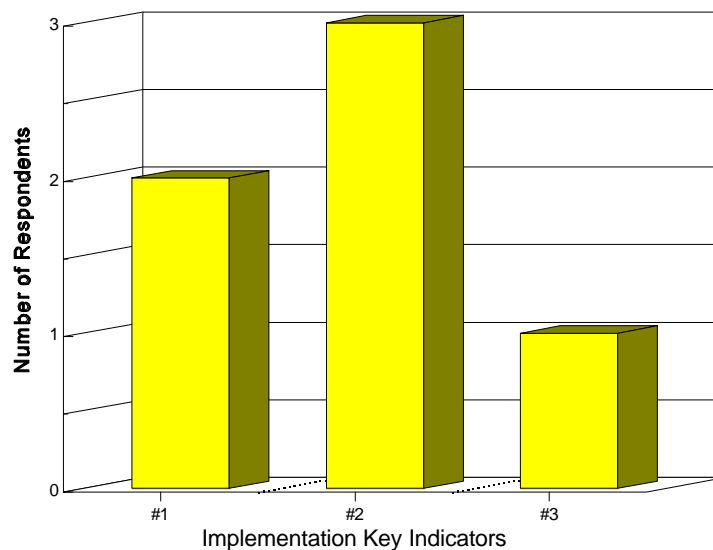
Findings:

Only one of the CPs surveyed provided formal guidance in meeting environmental goals to all departments within their organization. Other respondents indicate that individual operating units and production facilities must find their own ways to meet specific environmental goals, with some assistance given by corporate environmental staff.

Benchmark Element Summary:

This section summarizes the collective behavior of the three responding CPs as evaluated against the key indicators for this Benchmark Element. Exhibit 4-6 presents the total number of respondents reporting each key indicative behavior.

Exhibit 4-6
Number of Private Corporations Reporting Each
Implementation Key Indicator



#1 = Environmental Performance Goals Established
#2 = Comprehensive Multi-media Environmental Programs Exist
#3 = Formal Guidance Developed and Disseminated

In general, most of the private organizations responding to the survey have established progressive goals and multi-media environmental programs to integrate environmental protection into their daily business conduct. Two of the implementation key indicators for "Best in Class" organizations were reflected in the responses of all the Corporate Participants; however, one key indicator (i.e., provision of formal guidance to all corporate departments) was reported by only one of the private corporation respondents.

4.2.4 Element 4: Information Collection/Management/Follow-up

"Best in Class" organizations continually monitor environmental performance through the use of formal tracking and reporting mechanisms. Information acquired through these mechanisms is evaluated, disseminated, and used to continually improve environmental performance.

Overall Findings:

In general, most of the private organizations responding to the survey appear to have strong programs for information collection, management, and follow-up. Performance in a few areas (i.e. establishing information baselines and "lessons learned" programs) is unclear since the survey did not request this information.

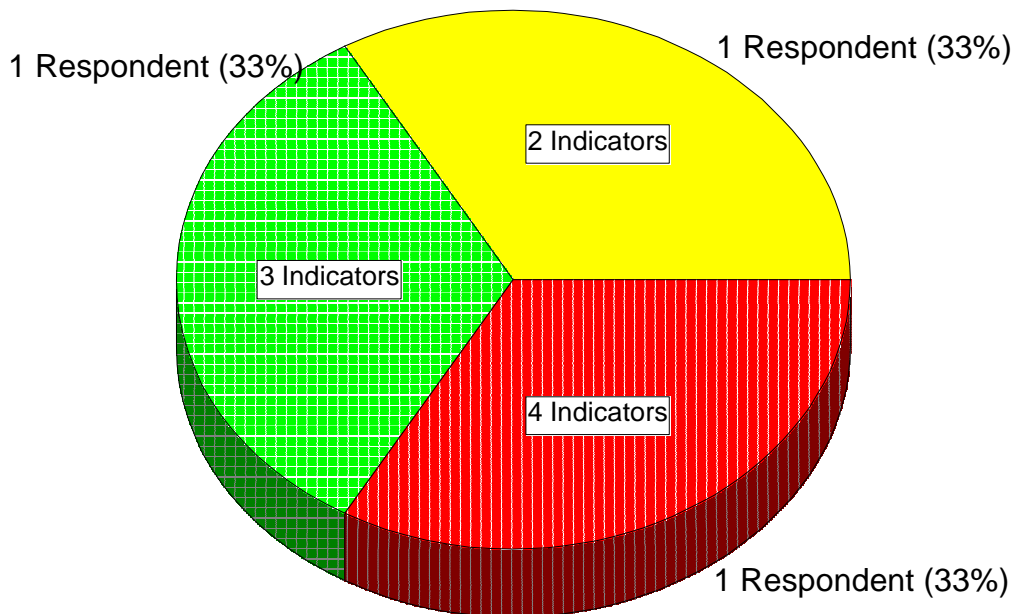
Six key indicators have been identified for "Best in Class" organizations in regard to environmental information collection/management/follow-up.

1. Information baselines have been established to identify, track, and measure inputs (i.e., energy, water, materials), and wastes and emissions outputs.
2. Information management systems are used to track and evaluate environmental performance. These systems measure and verify data, evaluate the collected data, and identify improvement opportunities.
3. Monitoring results are documented and distributed in a timely manner to appropriate management representatives.
4. Business operations are modified in response to data findings to correct performance and meet environmental goals. Correction actions are tracked and verified to ensure successful completion.
5. "Lesson learned" programs have been implemented to identify improvement opportunities.

6. Trends analyses are performed to identify root causes of environmental performance concerns.

As an introductory overview, Exhibit 4-7 presents the total number of respondents reporting multiple key indicative behaviors.

Exhibit 4-7
Element 4: Information Collection/Management/Follow-up
Key Indicators Reported by Corporate Participants



The following discussion compares specific survey findings against each of the six key indicators for "Best in Class" organizations with regard to environmental information collection/management/follow-up.

Information Collection/Management/Follow-up Key Indicator:

1. Information baselines have been established to identify, track and measure inputs (i.e., energy, water, materials) and wastes and emissions outputs.

Findings:

The questionnaire distributed to CPs did not include any questions regarding information baselines.

Information Collection/Management/Follow-up Key Indicator:

2. Information management systems are used to track and evaluate environmental performance. These systems measure and verify data, evaluate the collected data, and identify improvement opportunities.

Findings:

Two of the three CPs surveyed reported that they use information management systems to monitor and control environmental information. These two respondents used computerized database systems to track waste manifests and facility permits, and one has recently changed software to include a chemical tracking system that will be used to develop TRI reports. In addition, one of these two corporations notes that they use a computer program which includes a "tickler" system to let staff know when renewals or reauthorizations for the permits are due to environmental agencies. None of the corporations surveyed have a central inventory which tracks and profiles regulated sites, materials, waste streams, or emissions; however, the same two corporations indicated above have individual systems to track waste materials and emissions.

Information Collection/Management/Follow-up Key Indicator:

3. Monitoring results are documented and distributed in a timely manner to appropriate management representatives.

Findings:

All of the corporations surveyed reported that they perform environmental audits and evaluations using either internal staff (reported by two respondents) or outside consultants (reported by one respondent). One of the corporations has had an extensive auditing program in place since 1981 which audits against regulatory requirements and the corporation's own policies, standards, and directives (which are reported to be substantially more stringent than the environmental compliance

requirements). All of the corporations perform formal audits on an annual or bi-annual basis, with informal "self-audits" being conducted by facilities on a more frequent basis (e.g. daily, weekly , monthly).

At all of the CPs surveyed, audit results are documented and distributed in a timely manner to appropriate management representatives; however, audit reporting methods vary among the corporations surveyed. One corporation provides written audit reports to the President of Operations and the Vice President of Environmental Affairs; another corporation submits audit reports on a confidential basis to the facility manager and the general manager of the operating division; a third corporation submits audit results to management personnel for evaluation and then posts results for employees.

Information Collection/Management/Follow-up Key Indicator:

4. Business operations are modified in response to data findings to correct performance and meet environmental goals. Corrective actions are tracked and verified to ensure successful completion.
-

Findings:

All of the CPs surveyed stated that environmental issues and deficiencies identified in audit reports are tracked to ensure corrective actions are taken on a timely basis.

Two of the three corporations surveyed indicated that they have set specific time limits for the correction of all issues raised by environmental audits to ensure their successful completion. Of these two corporations, one respondent stated that audit results are tracked on a monthly basis and results are posted for employees to review their accomplishments. In addition, management personnel at this corporation analyze the data with staff to ensure that corrected operations are on plan with established environmental goals.

Information Collection/Management/Follow-up Key Indicator:

5. "Lessons learned" programs have been implemented to identify improvement opportunities.
-

Findings:

The questionnaire distributed to CPs did not include any questions regarding "lessons learned" programs.

Information Collection/Management/Follow-up Key Indicator:

6. Trends analyses are performed to identify root causes of environmental performance concerns.

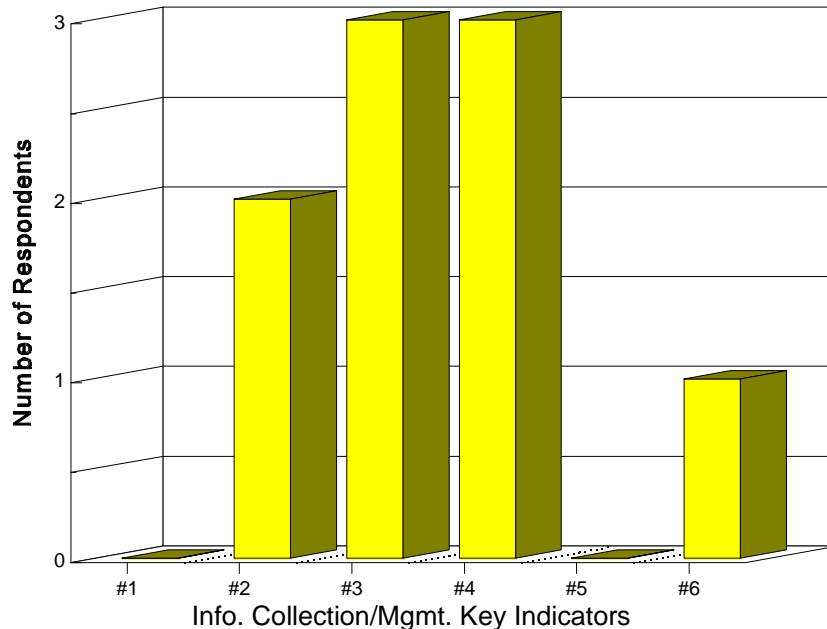
Findings:

Only one private corporation surveyed indicated that environmental audit report results are analyzed to identify root causes of environmental performance concerns. This corporation is currently developing a database to aid in analyzing trends across various reports.

Benchmark Element Summary:

This section summarizes the collective behavior of the three responding CPs as evaluated against the key indicators for this Benchmark Element. Exhibit 4-8 presents the total number of respondents reporting each key indicative behavior.

Exhibit 4-8 Number of Private Corporations Reporting Each Information Collection/Management/Follow-up Key Indicator



(Indicators #1 and #5 were not addressed in the questionnaire.)

#1 = Information Baselines Established

#2 = Information Management Systems Used

#3 = Monitoring Results Documented

#4 = Performance Corrected to Meet Goals

#5 = "Lessons Learned" Programs Established

#6 = Trends Analyses Performed

In general, most of the private organizations responding to the survey have strong programs for information collection, management, and follow-up, although there are a few areas where it is unclear whether their programs include components that address specific key indicators. Specifically, the survey did not ask whether formal environmental baselines have been developed that measure the material inputs and environmental releases of all current operations. Similarly, no questions were asked in the survey regarding "lessons learned" programs. Two of the information collection/management/follow-up key indicators for "Best in Class" organizations were reflected in the responses of all the CPs.

4.2.5 Element 5: Internal and External Communication

"Best in Class" organizations foster and use formal and informal channels to communicate environmental commitment and performance information. Employee communication is encouraged to develop cooperation and commitment, including bringing together employees from different disciplines.

Overall Findings:

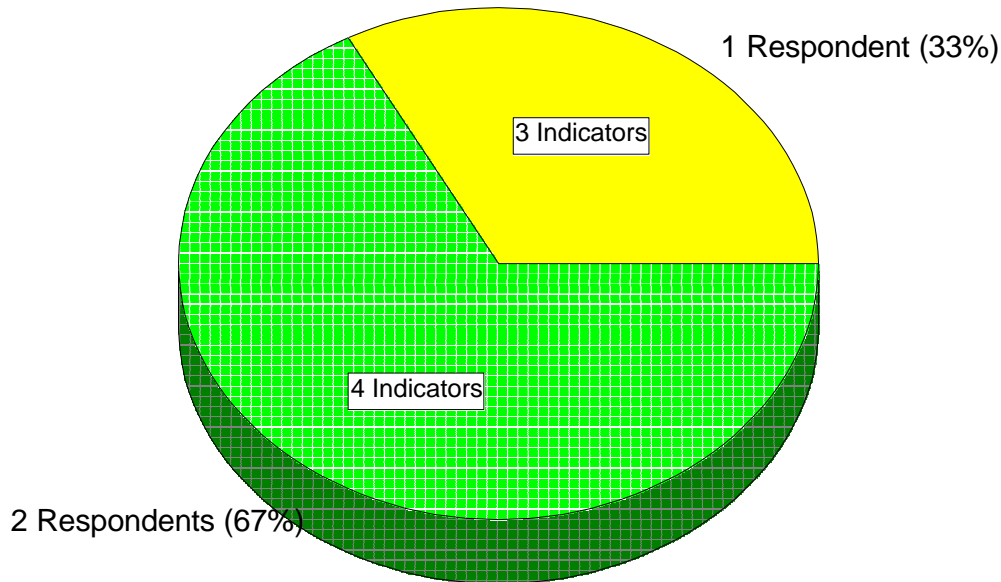
In general, all of the private organizations responding to the survey have strong internal and external communication channels for soliciting and disseminating environmental information. However, performance in a few areas (i.e. communicating successful strategies and cooperation with external oversight organizations) is unclear since the survey did not request this information.

Six key indicators have been identified that would indicate "Best in Class" performance in regard to internal and external communication.

1. Channels exist for employees to anonymously communicate environmental performance concerns without retribution.
2. Employee suggestions are actively solicited and any concerns raised are addressed and responses documented.
3. Successful environmental programs and strategies are communicated throughout the organization.
4. Environmental awareness and performance information is communicated through the use of employee newsletters, bulletin boards, electronic mail, etc.
5. Full and open cooperation with external oversight organizations exists.
6. Input regarding environmental performance and opportunity identification is actively solicited from external parties (e.g., customers, neighbors, regulators, general public).

As an introductory overview, Exhibit 4-9 presents the total number of respondents reporting multiple key indicative behaviors.

Exhibit 4-9
Element 5: Internal and External Communication
Key Indicators Reported by Corporate Participants



The following discussion compares specific survey findings against each of the six key indicators for "Best in Class" organizations with regard to internal and external communication.

Internal and External Communications Key Indicator:

1. Channels exist for employees to anonymously communicate environmental performance concerns without retribution.

Findings:

All of the CPs surveyed have a program in place which allows employees to raise environmental concerns anonymously. One corporation has established a hotline for employee concerns; the other two corporations have programs providing for anonymous written comments. One respondent provided a detailed description of their "comment program" which they report to be very successful. Comments from employees are submitted anonymously by mail under the program.

The comments are required to be answered candidly, within a fixed time, by the appropriate expert and signed by a vice president or equivalent. The Director of Environment, Health and Safety signs all environmental replies. If actions are not underway when the employee raises the concern, a positive response, as appropriate, is usually the case. In addition, employees are encouraged to call the Director of Environment, Health and Safety, which they often do. An Employee Satisfaction Measurement System annually surveys satisfaction level and concerns. Corrective action plans are mandatory under the comment program.

Internal and External Communications Key Indicator:

2. Employee suggestions are actively solicited and any concerns raised are addressed and responses documented.

Findings:

All of the CPs surveyed have a program in place which solicits and responds to employee suggestions (see discussion immediately above).

Internal and External Communications Key Indicator:

3. Successful environmental programs and strategies are communicated throughout the organization.

Findings:

The questionnaire distributed to CPs did not include any questions that specifically address this key indicator.

Internal and External Communications Key Indicator:

4. Environmental awareness and performance information is communicated through the use of employee newsletters, bulletin boards, electronic mail, etc.

Findings:

All of the CPs responding to the survey reported using a wide variety of methods to communicate environmental awareness and performance information internally to their employees. The methods used include memos, meetings, bulletin boards, management letters, electronic mail, video tapes, and articles in internal magazines and newsletters. These methods of communication are also used to distribute information to field offices within each of the corporations surveyed.

Internal and External Communications Key Indicator:

5. Full and open cooperation with external oversight organizations exists.

Findings:

The questionnaire distributed to CPs did not include any questions that specifically addressed this key indicator.

Internal and External Communications Key Indicator:

6. Input regarding environmental performance and opportunity identification is actively solicited from external parties (e.g., customers, neighbors, regulators, general public).

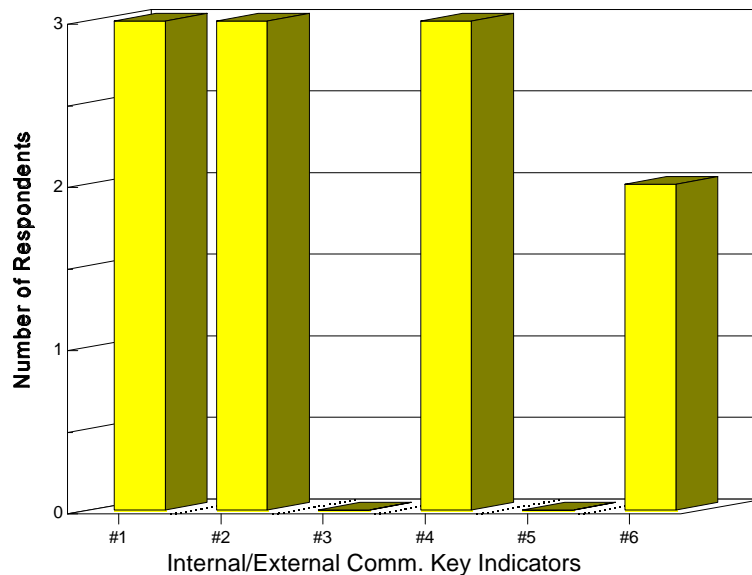
Findings:

Two of the respondents indicated that their corporations have formal outreach programs to share environmental information with the community, neighbors, media, and customers. Communication methods include speeches, benchmarking, technical papers, conference presentations, and publishing periodic reports to the public. One of these corporations has had their community outreach program in place for over 15 years, and the other corporation's program has been established for three years. The third respondent does not have a formal external publicity program; rather, it places responsibility with the plant manager that lives in the community to respond to any issues that are raised in the media or by the community.

Benchmark Element Summary:

This section summarizes the collective behavior of the three responding CPs as evaluated against the key indicators for this Benchmark Element. Exhibit 4-10 presents the total number of respondents reporting each key indicative behavior.

Exhibit 4-10
Number of Private Corporations Reporting Each Internal/External Communication Key Indicator



(Indicators #3 and #5 were not addressed in the questionnaire.)

- | | |
|--|--|
| #1 = Channels Exist for Reporting Environmental Concerns | #4 = Environmental Awareness Communicated |
| | #5 = Cooperation with External Oversight Organizations |
| #2 = Employee Suggestions Solicited | #6 = Input Solicited from External Parties |
| #3 = Successful Programs/Strategies Communicated | |

In general, all of the private organizations responding to the survey have strong internal and external communication channels for soliciting and disseminating environmental information. However, performance in a few areas (i.e. communicating successful strategies and cooperation with external oversight organizations) is unclear since the survey did not request this information. Three of the internal/external communication key indicators for "Best in Class" organizations were reflected in the responses of all the Corporate Participants.

4.2.6 Element 6: Personnel

"Best in Class" organizations ensure that personnel are capable of developing and implementing environmental initiatives. Employees are hired, trained, and deployed in ways that ensure that staff understand their environmental responsibilities and receive the training and support necessary to achieve environmental excellence.

Overall Findings:

In general, all of the private organizations responding to the survey have strong employee hiring, training, and incentive programs to ensure that sufficient environmental personnel are available to develop and implement environmental initiatives.

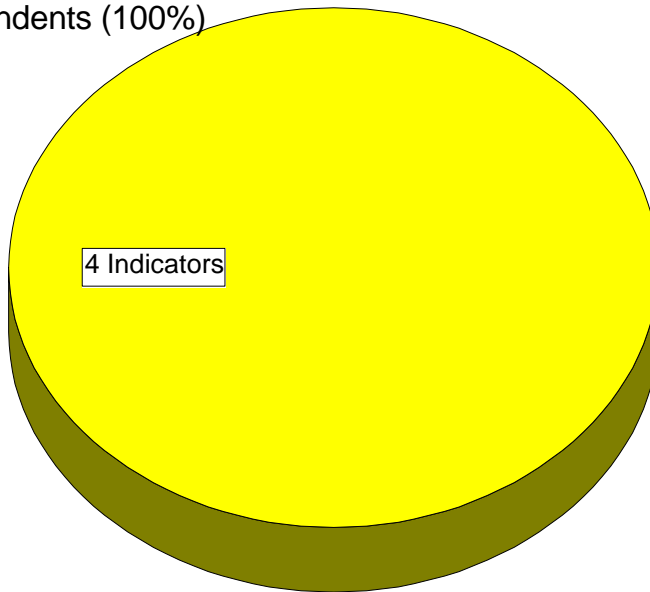
Four key indicators have been identified for "Best in Class" organizations in regard to personnel.

1. Sufficient qualified staff are hired, deployed, and trained to ensure that all aspects of the business operation are executed in accordance with the organization's environmental commitment.
2. All employees receive initial and ongoing training to ensure that they a) understand the environmental requirements of their job, and b) have the skills necessary to execute their job responsibilities in an environmentally sound manner.
3. Environmental excellence is the explicit responsibility of every employee throughout the organization, as demonstrated by the presence of environmental criteria in each employee's job description/performance evaluation, or by other means.
4. Exemplary environmental efforts are recognized and/or rewarded.

As an introductory overview, Exhibit 4-11 presents the total number of respondents reporting multiple key indicative behaviors.

Exhibit 4-11
Element 6: Personnel Key Indicators
Reported by Corporate Participants

All 3 Respondents (100%)



The following discussion compares specific survey findings against each of the four key indicators for "Best in Class" organizations with regard to personnel.

Personnel Key Indicator:

1. Sufficient qualified staff are hired, deployed, and trained to ensure that all aspects of the business operation are executed in accordance with the organization's environmental commitment.

Findings:

The current number of environmental staff reported to be employed by the corporations surveyed varied from 38 to 150 persons. Whether this level of staffing is sufficient is not indicated by the survey responses. All of the corporations surveyed employ some type of forecasting method to determine future environmental staffing needs, taking into consideration business volume

projections, new regulations, and environmental trends. All of the corporations specify qualifications required for entry-level and senior-level environmental positions (typically undergraduate or graduate degrees in science or engineering and appropriate management experience).

Personnel Key Indicator:

2. All employees receive initial and ongoing training to ensure that they 1) understand the environmental requirements of their job, and 2) have the skills necessary to execute their job responsibilities in an environmentally sound manner.

Findings:

All of the CPs stated that they provide environmental training to their employees. Two corporations provide initial environmental training as part of employee orientation, and all of the corporations provide ongoing environmental training on a mandatory basis. The amount of training required for employees varies among the respondents. One corporation stated that a requirement of 8 hours training is specified in each employee's performance appraisal. Others indicated that training is primarily based on the personal needs of the employees in conjunction with discussions with their management. All of the respondents indicated that emergency response procedures are communicated to employees through routine training sessions which are held at least annually.

Personnel Key Indicator:

3. Environmental excellence is the explicit responsibility of every employee throughout the organization, as demonstrated by the presence of environmental criteria in each employee's job description/performance evaluation, or by other means.

Findings:

All of the survey respondents indicated that staff who have some environmental duties, even though not their primary duties, have environmental responsibilities documented (usually in their job descriptions). One respondent indicated that plant managers and budget center managers have environmental performance measurements in their annual performance reviews; however, engineers

are appraised on environmental measurements only on a case by case basis.

In addition, all of the CPs responding to the survey indicated that all employees who are responsible for environmental management are held accountable for their performance and the performance of those they manage. The survey respondents differed in their methods for documenting accountability for environmental criteria. One corporation indicated that employees are held accountable for their performance through annual objectives to which pay and advancement are directly correlated. Others indicated that environmental responsibilities are delineated within business plans, job descriptions, or within the mission, vision, or objectives of a given organization within the corporation.

Personnel Key Indicator:

4. Exemplary environmental efforts are recognized and/or rewarded.

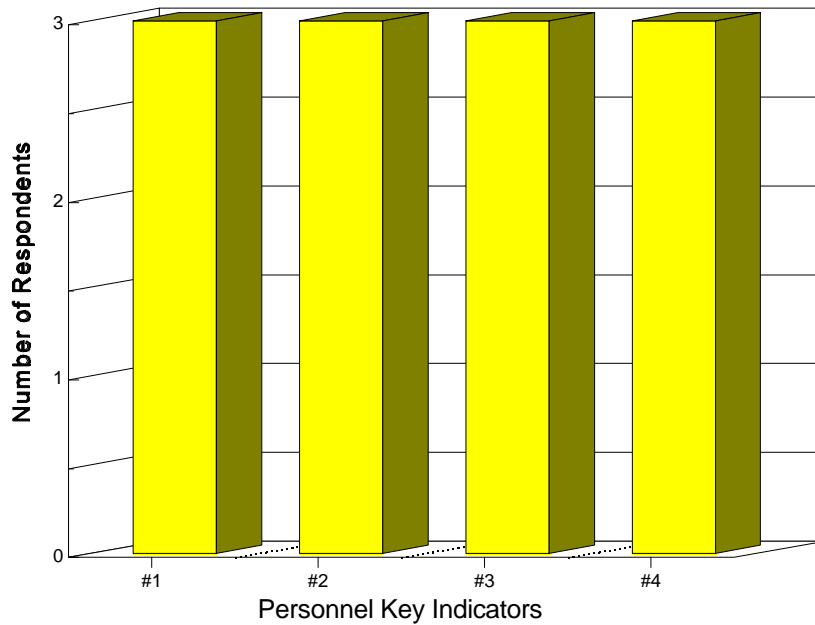
Findings:

All of the corporations surveyed recognized and/or rewarded their employees for exemplary environmental efforts. Each corporation has some type of formal program that consists of a variety of awards and incentives. One corporation presents a Presidents award, an Earth award, and awards for individual and team excellence, as well as gifts of merchandise and "dinner for two". Another corporation presents the Pollution Prevention Pays Award to individual employees and team members for developing and implementing pollution prevention projects, and bestows a Chairman's Environmental Award to employees whose top projects or activities best exemplify the corporation's commitment to the environment. The major form of recognition reported is public and peer recognition, rather than monetary rewards.

Benchmark Element Summary:

This section summarizes the collective behavior of the three responding CPs as evaluated against the key indicators for this Benchmark Element. Exhibit 4-12 presents the total number of respondents reporting each key indicative behavior.

Exhibit 4-12
Number of Private Corporations Reporting Each
Personnel Key Indicator



- #1 = Sufficient Qualified Staff Hired, Deployed, and Trained
- #2 = Initial and Ongoing Training for all Employees
- #3 = Environmental Excellence is the Responsibility of Every Employee
- #4 = Exemplary Efforts Recognized/Rewarded

In general, all of the private organizations responding to the survey have strong employee hiring, training, and incentive programs to ensure that sufficient environmental personnel are available to develop and implement environmental initiatives. All of the personnel key indicators for "Best in Class" performance were reflected in the responses of all the CPs.

CHAPTER 5: CIVILIAN FEDERAL AGENCIES

5.1 Data Sources

This chapter summarizes the responses received from 17 CFAs to a 34-question survey. In general, the questionnaire included questions intended to solicit responses regarding agency environmental compliance issues, as described by the following six subcategories: environmental compliance policy and guidance manuals; training availability and effectiveness; data management and access; internal agency compliance monitoring and auditing procedures; management support and agency outreach; and budgetary procedures and concerns. As a result, the questionnaire did not address many of the key indicators within the six Benchmark Elements. A copy of the questionnaire is included in Appendix A, Exhibit A-1, of this document.

Responses to the questionnaire were received from the following 17 CFAs:

- Treasury Department
- Postal Service
- Federal Aviation Administration
- Department of Commerce, Office of Federal Assistance and Management Support
- Department of Commerce, Economic Development Administration
- National Oceanic and Atmospheric Administration
- United States Department of Agriculture (USDA), Agricultural Research Service
- USDA Federal Grain Inspection Service
- USDA Animal and Plant Health Inspection Service
- USDA Soil Conservation Service
- USDA (branch not specified)
- Department of Justice
- EPA, Office of Administration and Resources Management
- National Security Agency, Environmental Management Services Division
- Three unidentified agencies

5.2 Performance Measured Against Benchmark Elements

5.2.1 Element 1: Organizational Structure

"Best in Class" organizations have established an organizational structure that gives authority, input, and voice to environmental performance.

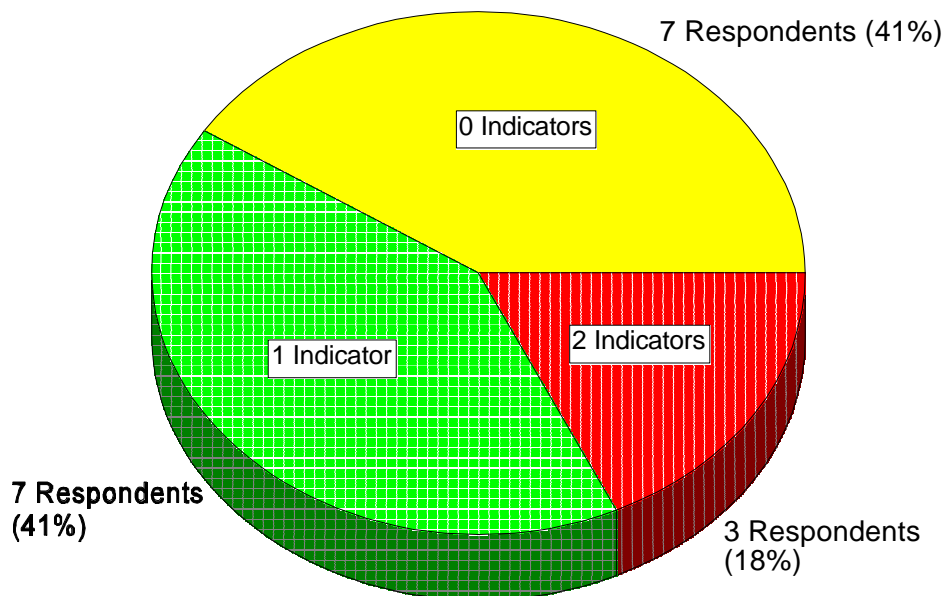
Overall Findings:

Four key indicators have been identified as "Best in Class" performance regarding organizational structure.

1. Organizational mission statement exists that sets forth environmental business focus, going beyond environmental compliance.
2. Clear lines of authority, responsibility, and accountability are established for environmental functions.
3. Formal systems for statutory and regulatory tracking/monitoring exist and access to legal resources is readily available.
4. Environmental management functions are represented at the high(est) levels of the organization.

A total of three questions included in the questionnaire solicited information that could be evaluated against two of these four key indicators (i.e., numbers 3 and 4). The three relevant questions asked respondents to provide information pertaining to the following items: the use of formal agency monitoring systems to track statutory and compliance issues; the occurrence of senior executive meetings regarding environmental issues; and the existence of high level positions that ensure statutorily compliant behavior. Exhibit 5-1 presents the total number of respondents reporting multiple key indicative behaviors.

Exhibit 5-1
Element 1: Organizational Structure Key Indicators
Reported by 17 Civilian Federal Agencies



The following discussion compares specific survey findings to each of the two key indicators addressed by the survey.

Organizational Structure Key Indicator:

1. Organizational mission statement exists that sets forth environmental business focus, going beyond environmental compliance.

Findings:

The CFA questionnaire did not include any questions that specifically addressed this key indicator.

Organizational Structure Key Indicator:

2. Clear lines of authority, responsibility, and accountability are established for environmental functions.

Findings:

The CFA questionnaire did not include a question that specifically addressed this key indicator.

Organizational Structure Key Indicator:

3. Formal systems for statutory and regulatory tracking/monitoring exist and access to legal resources is readily available.

Findings:

One question from the questionnaire addressed this key indicator (i.e., "Does your agency have a formal system for monitoring proposed regulatory changes and for developing guidance on compliance with changing regulations?") Twelve of 17 agencies report the existence of either formal or informal systems that are used to monitor statutory and regulatory issues. Four responses can be interpreted to mean formal agency monitoring systems are used. The most frequently reported formal monitoring systems consist of the use of published documents and attendance at interagency discussions. Eight respondents report the use of informal monitoring systems of varying degrees of complexity. Although these latter responses do not demonstrate key indicative behavior, they are discussed in this section for informational value.

Of the four agencies that report the existence of a formal agency regulatory monitoring system or program, two stated attendance at EPA Roundtable meetings as the means to this end. One response states that "government relations on Capitol Hill, Environmental Council, review of Federal Register, and EPA activities updates" are the formal means of monitoring statutory issues.

The systems in place for respondents that report informal monitoring systems vary significantly from one respondent to another. Several agencies report informal systems involving the review of the *Federal Register* or the *BNA Environmental Reporter*, or both, on a regular (sometimes daily) basis and the issuance of subsequent guidance from headquarters to affected individuals at operating units or in the field. Several respondents also report that they attend EPA Roundtable meetings. One agency reports that employees maintain a database of endangered species that is consulted when appropriate in the evaluation of a given program or proposed program.

Four of the five negative responses are one word responses of "no." The fifth negative is qualified, indicating that individual operating units are aware of the regulations that affect their operations.

Organizational Structure Key Indicator:

4. Environmental management functions are represented at the high(est) levels of the organization.

Findings:

Two questions solicited responses regarding this key indicative behavior.

- "Do senior executives, deputy administrators, deputy secretaries, etc. meet to discuss environmental issues on a periodic basis?"
- "Which specific high level persons, not reporting to departmental or facility managers, have authority to ensure compliance with Federal and state environmental laws, and agency environmental policies and directives?"

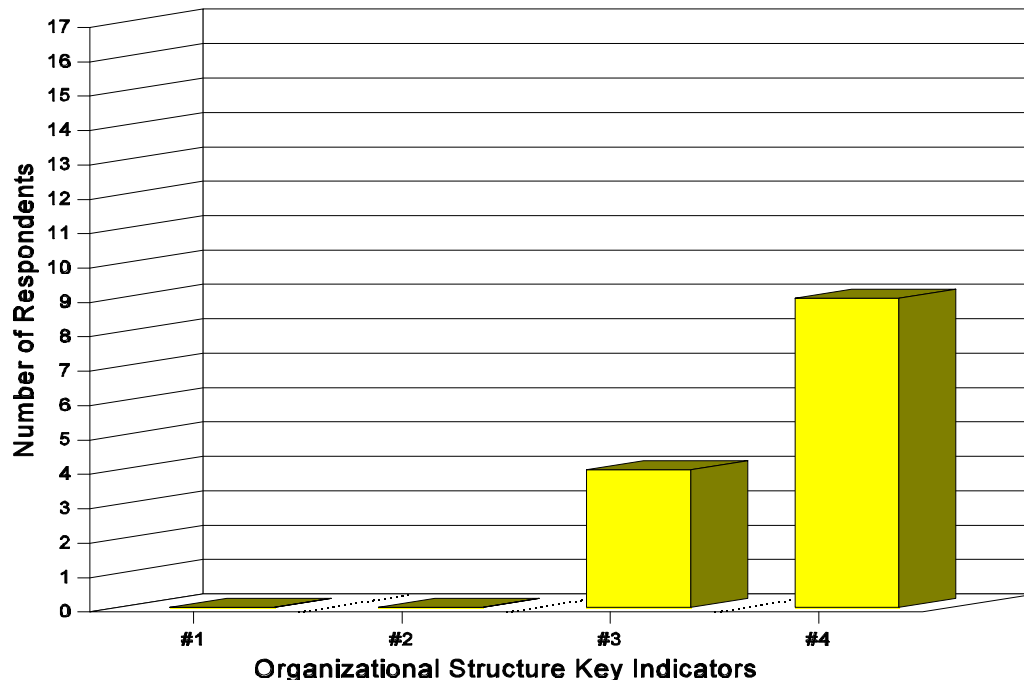
In reply to the first question, nine of the 17 respondents report that senior personnel meet to discuss environmental issues on a "periodic basis." Where provided, committee names are mentioned below. One agency has an Environmental Quality Council that addresses environmental issues in a timely manner and resolves conflicts among agency offices that may affect agency compliance. Another agency report that the Director meets with biotechnology and environmental protection deputies regarding environmental issues at least once each week. This agency also has a staff position entitled Deputy for Environmental Analysis and Documentation, exemplifying a specific high level job title relating to environmental performance. One response states that meetings are held largely on a case-specific basis. Another indicate that high level meetings were held in fiscal year 1992, but that the Senior Executive Environmental Steering Committee has been disbanded since then as the result of reorganization. Five agencies responded with an unqualified "yes." Negative responses range from one-word "no" answers to "do not know" to "very infrequently."

Additionally, the questionnaire inquired as to specific job titles for which personnel are directly responsible for regulatory compliance as well as adherence to agency environmental policies. For those ten agencies that respond positively to this question, or responses provide titles of individuals. For example, one agency reports that Area Directors, Center Directors, Research Leaders, and Location Coordinators all have the authority to ensure compliance with environmental requirements. Other responses state that Division Directors, all Agency managers, Deputy Chief for Administration, the Attorney General, and "designated agency personnel" are responsible for compliance. While this question does not specifically address indicative behavior, the job titles provided as responses suggest the existence of high-level individuals that are responsible for regulatory compliance as well as adherence to agency environmental policy. Attributing such responsibilities to a high-level employee is indicative of an environmental management function existing at a high level in an organization.

Benchmark Element Summary:

This section summarizes the collective behavior of the 17 respondent agencies as evaluated against the key indicators for the Organizational Structure Benchmark Element. Exhibit 5-2 below presents the total number of respondents reporting each key indicative behavior.

Exhibit 5-2
Number of Civilian Federal Agencies Reporting Each
Organizational Structure Key Indicator



(Indic

ators #1 and #2 were not addressed in the questionnaire.)

#1 = Mission Statement Exists
 #2 = Clear Lines of Authority

#3 = Statutory/Regulatory Tracking
 #4 = High-level Representation

As stated, the CFA survey did not solicit information regarding the first two key indicators of this Benchmark Element. Regarding the third key indicator, the use of formal statutory monitoring systems, the aspect of formality is lacking in most agency programs reported. Although an awareness of monitoring is reported, informal systems, especially when instituted only at the facility or operating unit level, have not been interpreted to demonstrate the key indicative behavior at issue. Regarding the fourth key indicator, the majority of the respondents report that senior executives meet to discuss environmental issues on a periodic basis. However, the fact that senior level executives meet to discuss environmental issues represents only one function of environmental management at a high organizational level. Positive responses to this question do not necessarily indicate that multiple "environmental management functions are represented at the highest levels of the organization."

5.2.2 Element 2: Management Commitment

"Best in Class" organizations possess and demonstrate a commitment to environmental excellence at each and every stage of the management hierarchy, and insist that the organization integrate environmental awareness and concerns into all relevant business operations.

Overall Findings:

Eight key indicators have been identified for "Best in Class" performance in regard to management commitment.

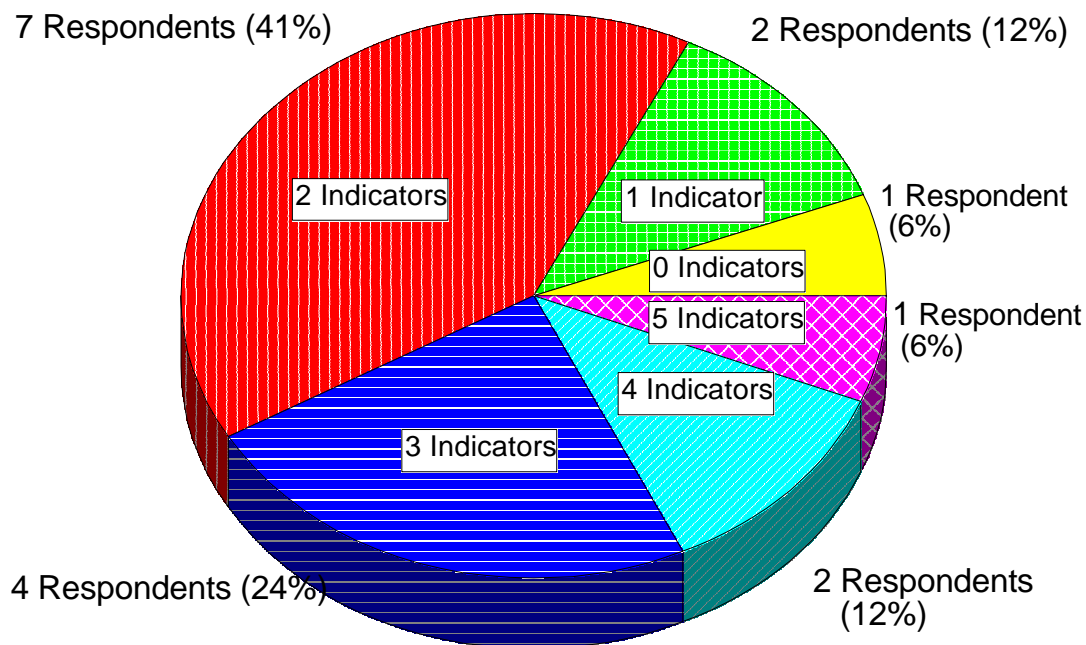
1. Organizations make resources available to identify, develop, initiate, and transfer environmental improvement technologies and strategies between facilities.
2. Environmental concerns are integrated into organizational business planning.
3. Environmental considerations play a role in all key organizational decisions.
4. Management demonstrates a commitment to environmental protection that goes beyond environmental compliance.
5. A formal environmental risk management program has been instituted and is used to assess potential risks from all proposed and existing operations.
6. Capital budgeting evaluation criteria are used to allow environmental projects to compete fairly for investment resources.
7. Headquarters level policies exist that establish an environmental sense of direction for facility level operations.
8. Environmental criteria are used for the selection and management of contractors/vendors.

Five of the eight key indicators are addressed to some extent in the CFAs questionnaire (i.e., numbers 2, 3, 4, 6, and 8). Six questions in the CFA questionnaire solicited information that could be evaluated against this Benchmark Element and its key indicators. The six relevant questions asked respondents to provide information pertaining to the following items: analysis of potential environmental impacts on agency mission; communication with environmental program offices regarding modified mission activities or planned demolition/construction activities; top management support for environmental compliance programs; participation in the Office of Management and Budget (OMB) A-106 process; briefing of contractors/vendors on environmental policies prior to contract performance; and the existence of standard contract clauses.

As an introductory overview, Exhibit 5-3 presents the total number of respondents reporting multiple indicative behaviors. Exhibit 5-3 illustrates that most agencies exhibit more than one key

indicative behavior. Two of 17 agencies reported exhibiting four or more indicators, exemplifying "Best in Class" behavior.

Exhibit 5-3 Element 2: Management Commitment Key Indicators Reported by 17 Civilian Federal Agencies



The following discussion compares specific survey findings against each of the eight key indicators for "Best in Class" performance with regard to management commitment.

Management Commitment Key Indicator:

1. Organizations make resources available to identify, develop, initiate, and transfer environmental improvement technologies and strategies between facilities.

Findings:

The CFA questionnaire did not include any questions that specifically addressed this key indicator.

Management Commitment Key Indicator:

2. Environmental concerns are integrated into organizational business planning.
-

Findings:

Most of the respondents report integrating environmental concerns, primarily regulatory compliance, into organizational business planning. This indicator was evaluated based on the responses to a question asking whether the agency had analyzed the potential impact of environmental issues on the future mission of the agency. Twelve of 17 agencies report some kind of analysis on the impacts to their future mission. Five agencies either responded negatively or failed to respond. If an agency reported any kind of analysis on the impacts to their future mission it was interpreted as constituting key indicative behavior.

This question elicited a wide range of responses. Only three responding agencies reported that they had looked at the impacts to their agency's future mission. Most agencies state that their analysis was ongoing or only minimally or partially conducted. While some agencies simply state that only a partial analysis had been done, others describe what analyses they had conducted. For example, one agency has analyzed compliance with the Clean Air Act and another agency has considered the impact of changes in environmental regulations and pesticide laws on program operations. In addition, one respondent states that this kind of analysis was conducted because permitting requires it; another agency reports that this type of analysis was conducted at the bureau level only. Four agencies reports they had not analyzed the impact on their agency's future mission, and one agency failed to respond to the question.

Management Commitment Key Indicator:

3. Environmental considerations play a role in all key organizational decisions.
-

Findings:

This key indicator for management commitment was addressed in the CFA questionnaire with a question asking about communicating regarding mission activities or construction planning (i.e., "Do the process operation and construction engineering departments or offices communicate with the environmental program offices when new or modified mission activities or demolition or construction is planned?"). Six agencies responded that this type of communication does occur. The remaining eleven agencies state either that this kind of communication only occurs "in part of their organization", "some of the time", "not at all", or that the question is not applicable. The limited focus of this question makes it difficult to evaluate whether environmental considerations play a role in *all* key organizational decisions. The six agencies that answered "yes" were considered as exhibiting key indicative behavior.

Six of 17 agencies report a simple "yes" response to this question. Three other agencies do not respond positively to this question, but provide qualified responses instead. One of these respondents states that only the process engineering department communicates with the environmental program office, and added that environmental functions at the agency are fragmented. Another states that such communication takes place both at the headquarters and field levels with varying relationships, and a third respondent states that communications between contracting and engineering offices may occur through administrative channels or directly with the environmental unit. Some responses are hard to interpret in the context of "Best in Class" behavior. For example, three agencies report that this kind of communication occurs only some of the time and one of these agencies adds that a coordinating council was established between office and environmental staff. Two agencies report "no" to this question. Two respondents state that the question is not applicable, and one qualifies their answer by stating that the GSA provides these services.

Management Commitment Key Indicator:

4. Management demonstrates a commitment to environmental protection that goes beyond environmental compliance.
-

Findings:

CFAs were surveyed regarding how top management supports the environmental compliance programs (i.e., "How is top management support for the environmental compliance program demonstrated?"). Extrapolation from this question to whether management at these agencies demonstrate a commitment beyond environmental compliance is difficult. Five of 17 agencies respond that management support goes beyond verbal support and includes providing resources, training, and program development. These five agencies were considered to be exhibiting the desired indicative behavior.

A wide variety of responses were given to this question and it is difficult to evaluate whether these agencies were following "Best in Class" behavior based on the responses. Five agencies provide answers indicating that some type of management commitment has been made. For example, some report that management has added staff dedicated to regional environmental compliance, or approved staffing increases and training (including workshops and conferences). One respondent states that in addition to written directives, guidance, and concern for how the agency's accomplishments and services are perceived, "management support is seen through "hands-on" interest in environmental issues." Two of these five respondents indicate that management demonstrates its support through program development, either support of the safety and occupational health program or through the development of one agency's Environmental Management Services Division.

Other responses are not considered representative of "Best in Class" behavior. For instance, two agencies respond that verbal support only was provided, and other responses indicate minimal support, lack of budgetary resources, and inadequate management commitment. One agency failed to respond to the question, and two agencies state that support was not demonstrated.

Management Commitment Key Indicator:

5. A formal environmental risk management program has been instituted and is used to assess potential risks from all proposed and existing operations.
-

Findings:

The CFA questionnaire did not include any questions that specifically addressed this key indicator.

Management Commitment Key Indicator:

6. Capital budgeting evaluation criteria are used to allow environmental projects to compete fairly for investment resources.
-

Findings:

One question in the survey indirectly addresses the issue of whether environmental projects can compete fairly for investment resources based on the budgeting evaluation criteria (i.e., "Does

your agency actively participate in the OMB A-106 process? What offices are involved?). The question was narrowly focussed on the OMB A-106 process. This process, set forth in a 1974 publication of the same name by the U. S. Office of Management and Budget, requires Federal Agencies to develop plans for allocating monies to ensure compliance with Federal environmental laws. Twelve of 17 respondents state that their agency actively participates in the OMB A-106 process. Of these twelve, six state that either field or headquarters environmental staff are involved in the process. The remaining positive responses indicate that responsibility resides within either the administrative or budgeting office. The six responses that explicitly state that environmental staff are involved in the budgeting process are considered to be exhibiting indicative behavior. Four respondents state either that they do not participate in this process, or don't know the answer to this question. One respondent provides no response.

Management Commitment Key Indicator:

7. Headquarters level policies exist that establish an environmental sense of direction for facility level operations.
-

Findings:

One question in the survey addressed this issue (i.e., "By what procedure and in what form are your environmental policy statements and directives communicated throughout the agency?") A majority of the 17 respondents indicate that their agencies has developed headquarters-level policies on environmental issues. When asked how environmental policies and directives are communicated, the reporting agencies provide a wide range of responses. Only one respondent reports that no procedures or policies for communicating directives are in place. Three agencies report the use of department administrative orders to communicate environmental policy statements or directives. Other agencies respond that directives are communicated via hard copy, electronic bulletin board, or memos. Some agencies report using a variety of communication methods including guidance documents, technical guidelines, manuals, management instructions or handbooks, administrative guides, safety, health and environmental program circulars, and training.

Management Commitment Key Indicator:

8. Environmental criteria are used for the selection and management of contractors/vendors.
-

Findings:

Two questions addressed whether environmental criteria are used for the selection and management of contractors/vendors.

- "Are contractors and vendors briefed on environmental policies prior to the performance of a contract?"
- "Do contracts contain an environmental and occupational health and safety clause as part of the standard terms and conditions?"

The primary focus of these two questions is management of contractors and not selection. Six of 17 respondents state that they brief contractors and vendors on environmental policy prior to performance on a contract. Eleven agencies state that their contracts contain an environmental and health and safety clause as part of their standard contracts. Four of these eleven agencies respond positively to both questions and, therefore, are only counted once in totaling the number of CFAs displaying indicative behavior for this key indicator.

In answer to the first question, six of 17 respondents state that they brief contractors and vendors on environmental policy prior to performance on a contract. Five of these agencies respond that they do so in a limited fashion "when necessary", "not routinely", or "in special circumstances only". Two agencies state that environmental responsibilities are included in job specifications or contract requirements. Two respondents state that the question is not applicable and one provides no response.

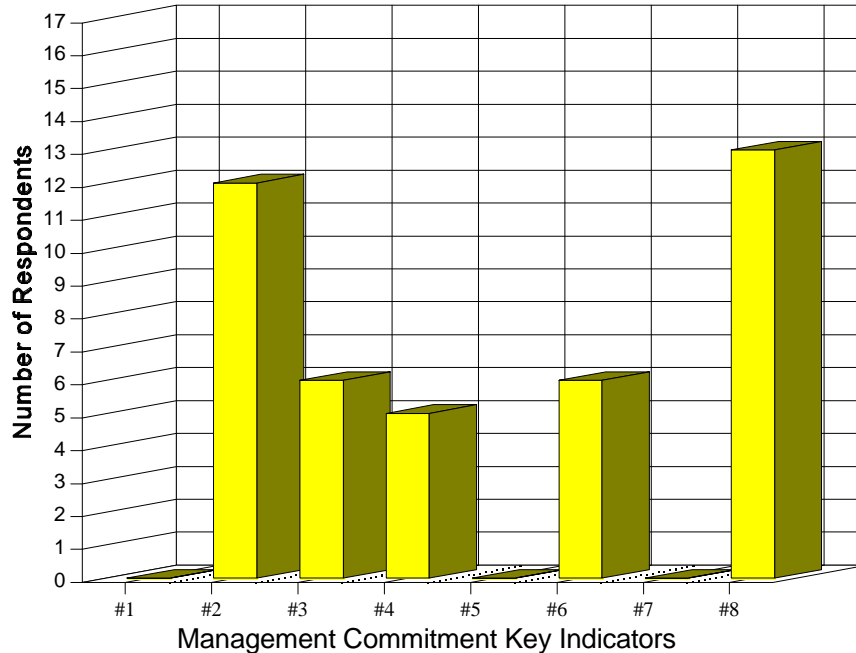
Responses to the second question reveal that agencies include environmental and health and safety clauses in their standard contracts. Eleven of 17 agencies give affirmative responses; however, one of these agencies qualifies their response by saying the clause is "weak". One of the eleven agencies state that "all government contracts" contain such clauses and another references the language in the contracts as "coming from the FARs".

Other types of responses are not considered as exemplifying key indicative behavior. For instance, one respondent states that their contracts contain only cursory clauses, such as protection of streams from sedimentation, while another state that inclusion of these clauses is done where applicable. Four agencies respond that such clauses are not included in the contracts.

Benchmark Element Summary:

This section summarizes the collective behavior of the 17 respondent agencies as evaluated against the key indicators for this Benchmark Element. Exhibit 5-4 presents the total number of respondents reporting each key indicative behavior.

Exhibit 5-4 Number of Civilian Federal Agencies Reporting Each Management Commitment Key Indicator



(Indicators #1, #5, and #7 were not addressed in the questionnaire.)

- | | |
|--|--|
| #1 = Resources Made Available | #5 = Formal Risk Management Program |
| #2 = Business Planning Integration | #6 = Budgeting Criteria Used |
| #3 = Role In All Organizational Decisions | #7 = Headquarters Level Policies |
| #4 = Management Commitment Beyond Compliance | #8 = Selection/Management of Contractors/Vendors |

Few of the questions posed to CFAs regarding management commitment allow for responses that can be analyzed for "Best in Class" behavior regarding this element. Two of the indicators, however, appear to be more popular with CFAs than other indicators. The second indicator listed in this element, relating to environmental concerns being integrated into organizational business planning, has a large number of respondents. Most of the agencies report analyzing to some degree the potential impacts that environmental issues have on their future mission. The eighth indicator has a large number of respondents, in part because there were two questions asked and therefore two possibilities of responding positively. Some agencies are already briefing contractors on environmental policy and many are including health and safety clauses in their contracts. Six respondents also report exhibiting indicator behavior for indicators three and six. These agencies report that environmental considerations play a role in key organizational decisions and that capital budgeting evaluation criteria are used for funding environmental projects.

5.2.3 Element 3: Implementation

"Best in Class" organizations carry out their day to day business operations in ways that integrate environmental protection into their business conduct.

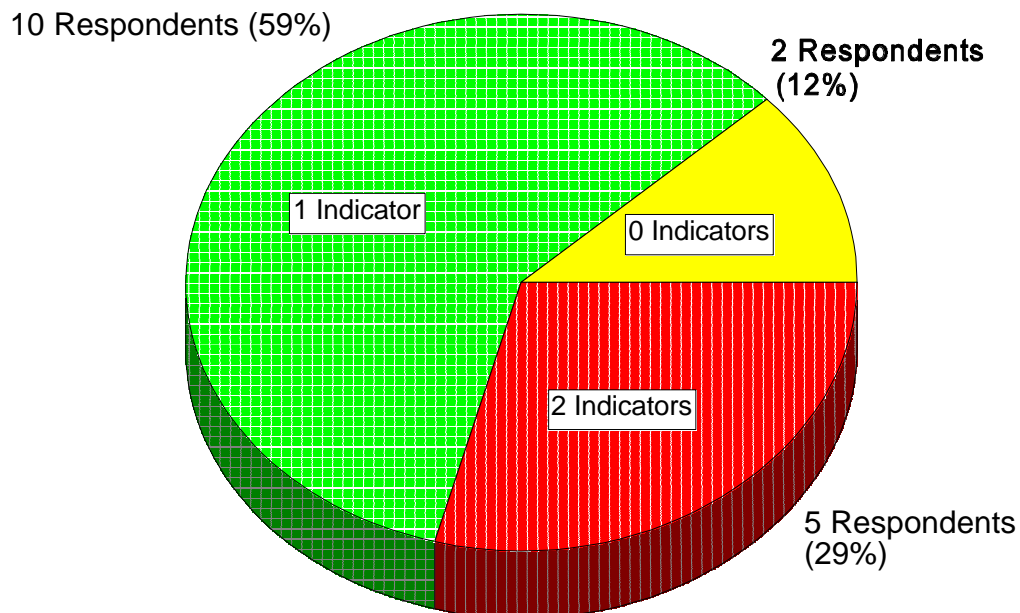
Overall Findings:

Three key indicators have been identified for "Best in Class" performance as it relates to implementation of environmental goals and programs.

1. Short and medium range environmental performance goals are established for individual business operations and for the organization as a whole.
2. A wide range of potential environmental impacts are addressed through comprehensive multi-media environmental programs. These programs include, but are not limited to:
 - pollution prevention
 - recycling
 - reuse
 - control
 - emergency preparedness and response
 - investigation and remediation of past practices.
 - compliance
 - affirmative procurement
 - energy conservation
3. Formal guidance is developed and disseminated to help ensure organizational environmental excellence.

A total of three questions included in the CFA questionnaire solicit information that could be evaluated against two of these three key indicators (i.e., numbers 2 and 3). The relevant questions ask respondents to provide information regarding the following items: development and communication of emergency response procedures through formal guidance documents; headquarters guidance concerning the identification, characterization and control of suspect waste streams; and identification of environmental impacts resulting from past agency operations. Exhibit 5-5 presents the total number of respondents reporting multiple key indicative behaviors.

Exhibit 5-5
Element 3: Implementation Key Indicators Reported by
Civilian Federal Agencies



The following discussion compares specific survey findings to each of the two key indicators addressed by the survey. In general, a majority of CFAs report having some implementation programs in place, including programs for soil remediation and underground storage tank removal. However, only two agencies report providing formal written guidance to their employees.

Implementation Key Indicator:

1. Short- and medium-range environmental performance goals are established for individual business operations and for the organization as a whole.

Findings:

The CFA questionnaire did not include any questions that specifically addressed this key indicator.

Implementation Key Indicator:

2. A wide range of potential environmental impacts are addressed through comprehensive multi-media environmental programs. These programs include:
- pollution prevention
 - recycling
 - reuse
 - control
 - emergency preparedness and response
 - investigation and remediation of past practices
 - compliance
 - affirmative procurement
 - energy conservation

Findings:

One question in the CFA survey solicited responses that can be used to evaluate agency behaviors against this key indicator (i.e., "Have you identified and quantified environmental liabilities from past operations, mission activities, discontinued offices, bureaus or departments? Has the agency developed a plan for minimizing those liabilities?"). In response to this question, ten agencies report having at least begun the process of identifying environmental liabilities incurred as a result of past operations. In general, plans to continue investigation and to remediate sites are underway for these ten agencies. Positive and negative responses are discussed in further detail below.

Of the ten agencies that respond positively to this question, one indicates that all sites have been cleaned up. The other nine respondents report that identification and remediation activities are underway at varying stages. One agency states that RCRA Section 3016 inventories have been completed at several facilities. In addition, Preliminary Assessments, site inspections, the identification of underground storage tanks (USTs) and removal actions have also been completed. Several responses simply state that investigations have started or are ongoing. One agency reports that decontamination of pesticides and disposal activities are conducted on an ad-hoc basis. Negative responses range from an unqualified "no" to qualified responses such as "no, however with pending closures [these activities] may be important in [the] future" and "no, a partial strategy [has been] developed, but seems inadequate for nationwide environmental needs." Two agencies state that the

question is not applicable to them.

Implementation Key Indicator:

3. Formal guidance is developed and disseminated to help ensure organizational environmental excellence.

Findings:

Two questions in the CFA survey solicited responses that can be evaluated against this key indicator.

- Have emergency response procedures been developed and communicated to all affected employees through formal guidance documents?
- What guidance does the agency offer to its regional units for the characterization and control of all suspect waste streams and emissions in order to obtain compliance?

In response to the first question, ten agencies report that formal emergency response procedures are developed and disseminated to agency personnel.

The second question asks respondents to describe any guidance offered by the agency to its regional units regarding the characterization and control of suspect waste streams. Only two of the ten positive responses indicate that a formal guidance program is in place. Other positive responses indicate that only informal guidance is provided to regional units by the agency.

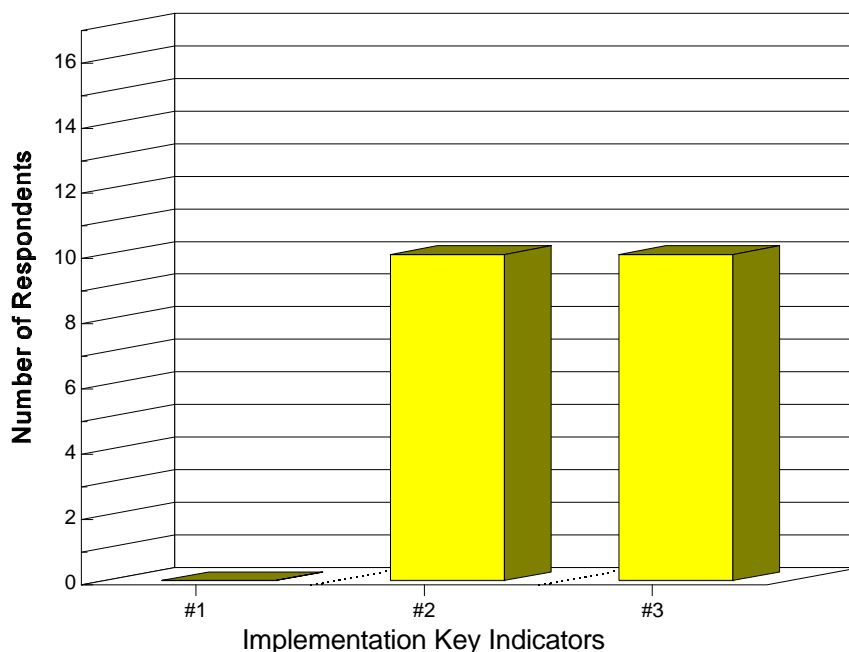
In response to the first question, one agency reported that a formal Comprehensive Emergency Response Program is well publicized within the agency. A second agency reported that emergency response procedures are included in its formal agency hazardous waste management and UST Programs. Two other agencies indicated that Safety and Health divisions issue directives and develop formal channels of communication throughout the agency. In addition, two agencies stated that emergency response procedures have been developed; however, they are informal and are developed at facility level as appropriate to specific functions. The five negative responses consisted of four unqualified, "no" answers and one answer of "in some cases."

The second question elicited only two responses that indicate formal agency guidance is provided regarding the characterization and control of suspect waste streams. One agency reported that formal recycling, waste reduction, hazardous waste, storm water, clean air, asbestos, and UST programs are in place. The second agency stated that guidance documents regarding hazardous waste determination and the selection of a treatment, storage, disposal facility were circulated in 1989 and 1990. Eight respondents indicated that informal guidance programs are in place, including environmental audit programs, Health and Safety division training, technical assistance through on-site Agency inspections, and broad policy documents emphasizing compliance.

Benchmark Element Summary:

This section summarizes the collective behavior of the 17 respondent agencies as evaluated against the key indicators for this Benchmark Element. Exhibit 5-6 presents the total number of respondents reporting each key indicative behavior.

Exhibit 5-6
Number of Civilian Federal Agencies Reporting
Each Implementation Key Indicator



Indicator #1 was not addressed in the questionnaire.)

(Indicator

- #1 = Environmental Performance Goals Established
- #2 = Comprehensive Multi-media Environmental Programs Exist
- #3 = Formal Guidance Developed and Disseminated

As stated above, the CFA survey did not solicit information pertaining to the first key indicator of this Benchmark Element. As a group, a majority of these CFAs have addressed the identification of environmental impacts of past operations. Many of the agencies report addressing remediation of contaminated sites. Regarding the third key indicator, it appears that the respondents lack the formality required for "Best in Class" behavior. Although guidance is provided at agency level according to ten of the respondents, management commitment demonstrated by formal, written guidance is only evident in two agencies.

5.2.4 Element 4: Information Collection/Management/Follow-up

"Best in Class" organizations continually monitor environmental performance through the use of formal tracking and reporting mechanisms. Information acquired through these mechanisms is evaluated, disseminated, and used to continually improve environmental performance.

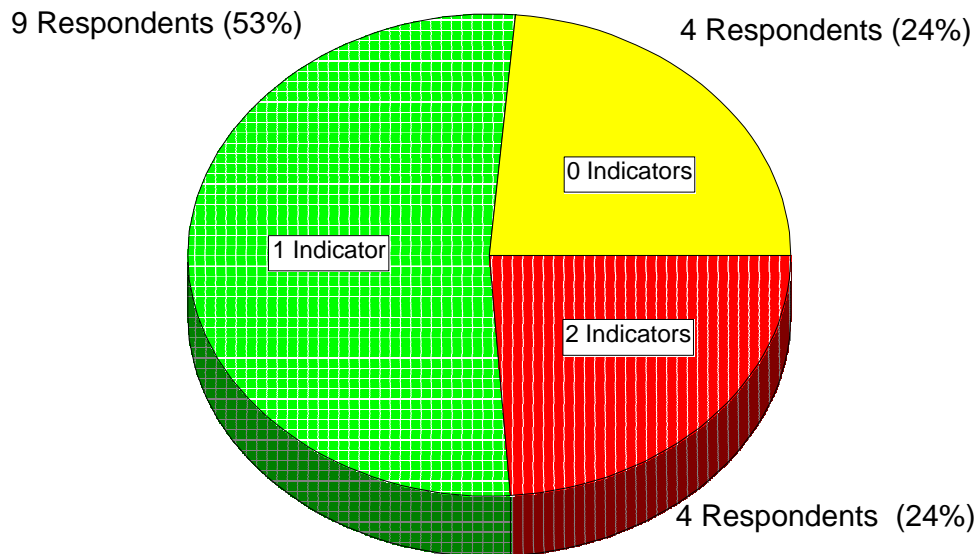
Overall Findings:

Six key indicators have been identified for "Best in Class" performance in regard to environmental information collection/management/follow-up.

1. Information baselines have been established to identify, track and measure inputs (i.e., energy, water, materials), and wastes and emissions outputs.
2. Information management systems are used to track and evaluate environmental performance. These systems measure and verify data, evaluate the collected data, and identify improvement opportunities.
3. Business operations are modified in response to data findings to correct performance and meet environmental goals. Corrective actions are tracked and verified to ensure successful completion.
4. Environmental performance results are documented and distributed in a timely manner to appropriate management representatives.
5. "Lessons learned" programs have been implemented to identify improvement opportunities.
6. Trends analyses are performed to identify root causes of environmental performance concerns.

Only two of six indicators were addressed in the questionnaires sent to the CFAs (i.e., #2 and #4). Four questions in the CFA questionnaire solicited information that could be evaluated against this Benchmark Element and its key indicators. The four relevant questions asked respondents to provide information pertaining to the following areas: agency-wide environmental databases for tracking compliance; environmental auditing, assessment, and monitoring; central inventories for tracking agency-regulated sites, materials, waste streams or emissions; and regional reporting of regulatory data to agency executives at headquarters. As an introductory overview, Exhibit 5-7 presents the total number of indicators each respondent reported following.

Exhibit 5-7
Element 4: Information Collection/Management/Follow-up
Key Indicators Reported by Civilian Federal Agencies



The following discussion compares specific survey findings against each of the two key indicators for "Best in Class" performance with regard to environmental information collection/management/follow-up. In general, most reporting agencies show at least one indicative behavior and four agencies indicate behavior in accordance with both the indicators surveyed.

Information Collection/Management/Follow-up Key Indicator:

1. Information baselines have been established to identify, track and measure inputs (i.e., energy, water, materials) and wastes and emissions outputs.

Findings:

The CFA questionnaire did not include any questions that specifically addressed this key indicator.

Information Collection/Management/Follow-up Key Indicator:

2. Information management systems are used to track and evaluate environmental performance. These systems measure and verify data, evaluate the collected data, and identify improvement opportunities.

Findings:

Three questions addressed whether information management systems are used to track and evaluate environmental performance.

- "Is there an agency-wide environmental database established to ensure that proper records (e.g., waste manifests, biennial reports, permits, etc.) are maintained and updated?"
- "Is there a central inventory, either computer-based or written, that tracks and profiles all regulated agency sites, materials, waste streams or emissions?"
- "Is there an environmental auditing, assessment or other system in place to oversee and monitor the agency's compliance activities?"

Many of the agencies reported having information management systems to track different types of environmental activities. It should be noted, however, that the questionnaire did not ask whether these systems are used to evaluate environmental performance or improvement opportunities.

None of the agencies responded that they had a working agency-wide environmental database to track compliance records; however, a variety of responses are given relating to the type of databases or systems in place. Five agencies provided responses regarding the types of tracking systems being used and are considered as having reported positively for this indicative behavior. Thirteen of 17 CFAs stated that some type of environmental auditing, assessment or other system was in place or being developed to oversee and monitor the agency's compliance activities, interpreted as indicative behavior. Only six CFAs responded that they have a central inventory and are thus classified as exhibiting indicative behavior. Agencies reporting at least one type of information management tracking system are considered to be following this key indicative behavior.

Only one respondent indicated having an agency-wide environmental database to track compliance related records; however, the respondent commented that the database was inadequate. Five of the respondents reported having some type of information management tracking system in place. Most of these systems are separate, individual databases (for example, databases for USTs, pesticides, or solid and hazardous waste). One respondent stated that they have a manual system. Three of the respondents indicated they are in the process of developing agency-wide tracking

systems. The remaining reporting agencies indicated they have no system or the question is not applicable.

Thirteen of 17 CFAs stated that they currently have or are developing an environmental auditing or assessment system to monitor the agency's compliance activities. Five of the 17 responded affirmatively to the question and provided no qualifying information. One agency commented that they are developing an auditing program for solid and hazardous waste. Another respondent stated that they plan to start annual inspections to target the overall quality of their safety, health and environmental management programs. A third agency stated that this type of activity is developed at the bureau level. Three agencies reported that they do not have environmental auditing systems in place and did not mention whether they are in the process of developing one.

The majority of respondents did not have a central inventory for tracking agency-regulated sites, materials, waste streams or emissions. Only six CFAs responded that they have a central inventory. One of these respondents stated that their central inventory tracks agency sites and materials and that this information is used to justify resource expenditures. Another agency commented that their inventory database is used for tracking projects. Two other agencies indicated that their inventory systems are used for monitoring field activities and waste streams.

Information Collection/Management/Follow-up Key Indicator:

3. Business Operations are modified in response to data findings to correct performance and meet environmental goals. Corrective actions are tracked and verified to ensure successful completion.

Findings:

The CFA questionnaire did not include any questions that specifically addressed this key indicator.

Information Collection/Management/Follow-up Key Indicator:

4. Environmental performance results are documented and distributed in a timely manner to appropriate management representatives.

Findings:

One survey question addressed this key indicator (i.e., "How does the system ensure the reporting of regulatory data by regional compliance staff to agency executives at Headquarters?"). Eleven of 17 reporting agencies responded negatively, commenting that they "didn't have such a system", that they "didn't know the answer to the question", that the question "wasn't applicable" or provided no response at all. Those agencies that reported some distribution of environmental performance information are considered as exemplifying indicative behavior.

Only four agencies reported how information is communicated from the field or regional offices. One of these agencies stated that reports are communicated from lab directors to headquarters staff and another agency responded that field reports are handled by a single office at headquarters but not in an automated fashion. One respondent stated that notices of violation and facility compliance agreements were generally executed in the field and sent to headquarters. Another agency stated that information on environmental incidents flows through administrative channels to headquarters.

Seven of 17 respondents either provided no response or stated that the question is not applicable. One of these agencies explained that the question is not applicable since they do not have regional offices and such matters are handled at the national headquarters office. Three agencies responded that they do not have any systems in place, and one respondent replied that he/she does not know the answer to the question.

Information Collection/Management/Follow-up Key Indicator:

5. "Lessons learned" programs have been implemented to identify improvement opportunities.

Findings:

The CFA questionnaire did not include any questions that specifically addressed this key indicator.

Information Collection/Management/Follow-up Key Indicator:

6. Trends analyses are performed to identify root causes of environmental performance concerns.

Findings:

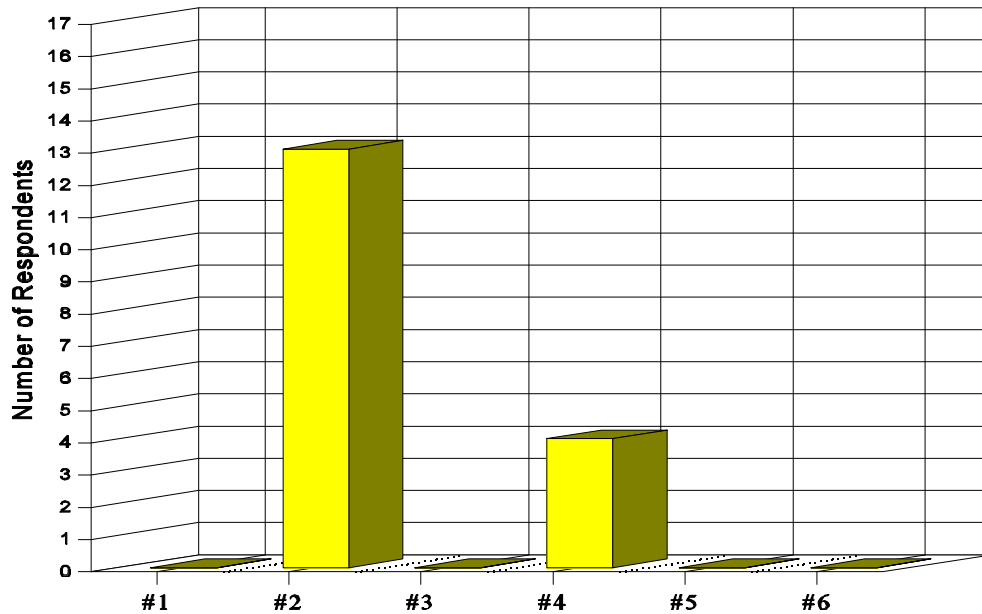
The CFA questionnaire did not include any questions that specifically addressed this key indicator.

Benchmark Element Summary:

This section summarizes the collective behavior of the 17 respondent agencies as evaluated against the key indicators for this Benchmark Element. Exhibit 5-8 presents the total number of respondents reporting each key indicative behavior.

Exhibit 5-8

Number of Civilian Federal Agencies Reporting Each Information Collection/Management/Follow-up Key Indicator



Information Collection/Management/Follow-up Key Indicators

(Indicators #1, #3, #5, and #6 were not addressed in the questionnaire.)

#1 = Information Baselines Established

#2 = Information Management Systems Used

#3 = Monitoring Results Documented

#4 = Performance Corrected to Meet Goals

#5 = Performance Corrected to Meet Goals

#6 = Trends Analysis Performed

The key indicator addressing information management tracking systems was highly supported, in part because there were three questions asked on the subject and therefore three possibilities of responding positively. The most popular information management system reported related to environmental auditing and assessment. It is interesting to note that even though auditing systems are in place, there are no mechanisms reported to be in place to ensure reporting of regulatory data.

5.2.5 Element 5: Internal and External Communication

"Best in Class" organizations foster and use formal and informal channels to communicate environmental commitment and performance information. Employee communication is encouraged to develop cooperation and commitment, including bringing together employees from different disciplines.

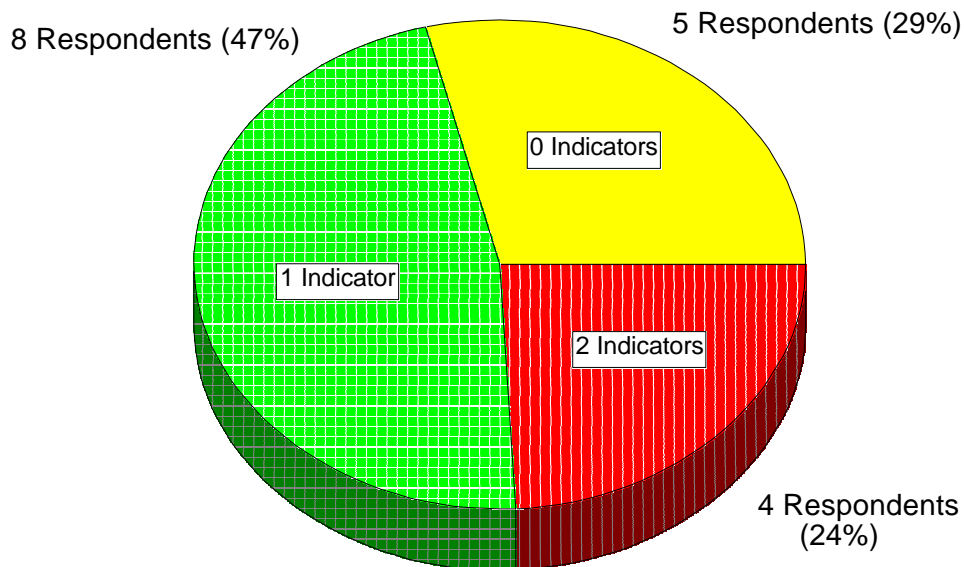
Overall Findings:

Six key indicators have been identified for "Best in Class" performance in regard to internal and external communication.

1. Channels exist for employees to anonymously communicate environmental performance concerns without retribution.
2. Employee suggestions are actively solicited and any concerns raised are addressed and responses documented.
3. Successful environmental programs and strategies are communicated throughout the organization.
4. Environmental awareness and performance information is communicated through the use of employee newsletters, bulletin boards, electronic mail, etc.
5. Full and open cooperation with external oversight organizations exists.
6. Input regarding environmental performance and opportunity identification is actively solicited from external parties (e.g., customers, neighbors, regulators, general public).

Only two of the six indicators were addressed in some fashion by the questionnaire (i.e., numbers 1 and 6). Three questions in the CFA questionnaire solicited information that could be evaluated against this Benchmark Element and its key indicators. The three relevant questions asked respondents to provide information pertaining to the following areas: systems that encourage employees to report environmental concerns; environmental program benchmarking activities; and third party assessments of environmental programs. As an introductory overview, Exhibit 5-9 illustrates the total number of indicators each respondent reported they follow.

Exhibit 5-9
Element 5: Internal and External Communication
Key Indicators Reported by 17 Civilian Federal Agencies



The following discussion compares specific survey findings against each of the six key indicators for "Best in Class" performance with regard to internal and external communication. In general, most reporting agencies show at least one indicative behavior and four agencies indicate that they follow both the indicators surveyed.

Internal and External Communication Key Indicator:

1. Channels exist for employees to anonymously communicate environmental performance concerns without retribution.

Findings:

A wide range of responses are reported regarding whether channels exist for employees to anonymously communicate environmental performance concerns without retribution. One question specifically asked whether a well-publicized system existed at the agency to encourage employees to report problems (i.e., "Are agency employees and contractors provided with a well-publicized system that encourages the reporting of environmental problems, violations, or criminal conduct within the agency without fear of retaliation?"). Only three respondents stated that they have such

a system in place. Four other respondents stated that no formal system is in place but that channels do exist. Either of these two responses are interpreted as key indicative behavior.

As stated above, only three agencies reported the existence of well-publicized systems to encourage employees to report problems. Seven respondents answered this question negatively. Of the four agencies that do not report having a formal system, two state that employees were encouraged to report problems. One of these respondents stated, however, that resolution of problems is problematic. One agency commented that the system is not well publicized, while another states that employees "know where to call anonymously". Two of 17 agencies did not respond to the question at all.

Internal and External Communication Key Indicator:

2. Employee suggestions are actively solicited and any concerns raised are addressed and responses documented.

Findings:

The CFA questionnaire did not include any questions that specifically addressed this key indicator.

Internal and External Communication Key Indicator:

3. Successful environmental programs and strategies are communicated throughout the organization.

Findings:

The CFA questionnaire did not include any questions that specifically addressed this key indicator.

Internal and External Communication Key Indicator:

4. Environmental awareness and performance information is communicated through the use of employee newsletters, bulletin boards, electronic mail, etc.

Findings:

The CFA questionnaire did not include any questions that specifically addressed this key indicator.

Internal and External Communication Key Indicator:

5. Full and open cooperation with external oversight organizations exists.

Findings:

The CFA questionnaire did not include any questions that specifically addressed this key indicator.

Internal and External Communication Key Indicator:

6. Input regarding environmental performance and opportunity identification is actively solicited from external parties (e.g., customers, neighbors, regulators, general public).

Findings:

There is a wide range of responses regarding the solicitation of input from external parties. Two questions were asked regarding this key indicator.

- "Has the agency formally compared its environmental programs (including regulatory compliance, risk reduction and best management practices) with other Federal agency programs? Has the agency compared its programs with those in the private sector (Fortune 500 companies)?"
- "Has an objective, third-party assessment of the effectiveness of your agency's environmental program been conducted?"

Nine of 17 CFAs report that their agencies have not formally compared their environmental programs to other Federal agency programs or the private sector. Eight of the respondents indicated that an objective, third party assessment of the effectiveness of their environmental program has not been conducted and a ninth failed to respond. It is interesting to note that even though more respondents answered negatively to each of these questions, overall ten of 17 respondents indicate a positive response to at least one of these questions. Therefore, a majority of respondents were given credit for exhibiting this indicative behavior.

Nine of the 17 reporting agencies responded negatively to the first question. Only one agency responded that they have done benchmarking with other Federal and private organizations. Most of the remaining organizations have surveyed or compared themselves to other Federal agencies. Two agencies reported comparing some programs to the private sector, one commented that risk has not fully been evaluated.

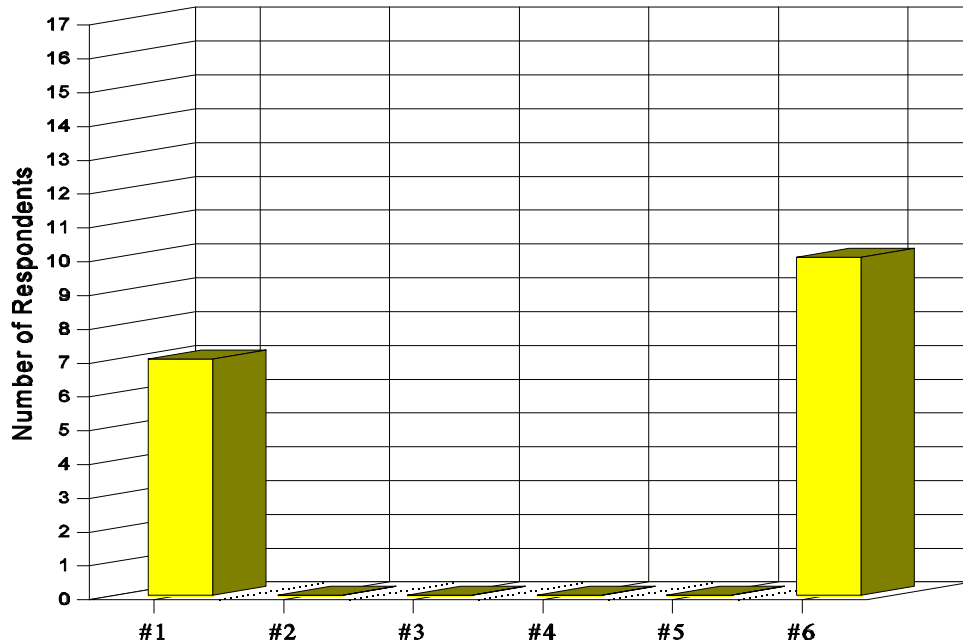
With regard to the second question, most of the respondents indicated that an objective, third party assessment of the effectiveness of their environmental program has not been conducted. The question posed to respondents did not address whether the assessment was solicited by the agency or required of them. Eight respondents stated that no third party assessment has been made. Two respondents stated that consultants were brought in. Three agencies did not state who performed the third party assessment but indicated that it was conducted. Two respondents stated that there has been an Inspector General (IG) audit. If the respondent stated that the third party audit was conducted by IG, it was still interpreted as positive indicative behavior.

Benchmark Element Summary:

This section summarizes the collective behavior of the 17 respondent agencies as evaluated against the key indicators for this Benchmark Element. Exhibit 5-10 presents the total number of respondents reporting each key indicative behavior.

Exhibit 5-10

Number of Civilian Federal Agencies Reporting Each Internal/External Communication Key Indicator



Internal/External Communication Key Indicators

(Indicators #2, #3, #4, and #5 were not addressed in the questionnaire.)

- #1 = Channels Exist for Reporting Environmental Concerns
- #2 = Employee Suggestions Solicited
- #3 = Successful Programs/Strategies Communicated
- #4 = Environmental Awareness Communicated
- #5 = Cooperation with External Oversight Organization
- #6 = Input Solicited from External Parties

Very few of the indicators in this Benchmark Element were addressed by the questionnaire. There is little difference in popularity between the two indicators discussed above. The sixth indicator had a larger number of respondents, probably because there were two questions asked and therefore two possibilities of responding positively.

5.2.6 Element 6: Personnel

"Best in Class" organizations ensure that personnel are capable of developing and implementing environmental initiatives. Employees are hired, trained, and deployed in ways that ensure that staff understand their environmental responsibilities and receive the training and support necessary to achieve environmental excellence.

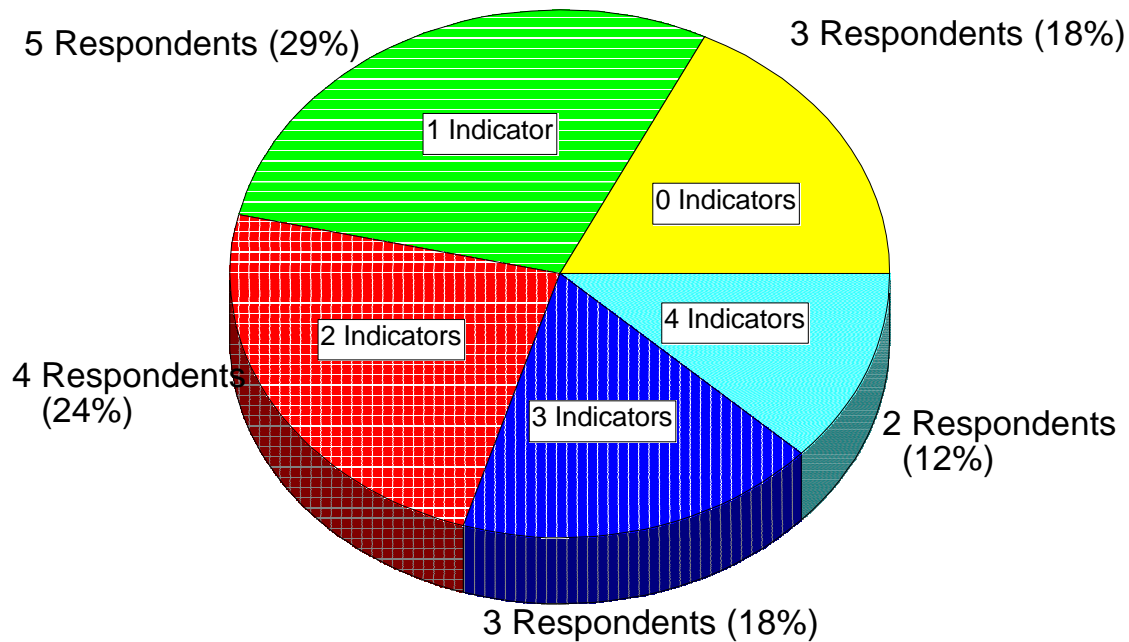
Overall Findings:

Four key indicators have been identified as "Best in Class" performance relates to personnel.

1. Sufficient qualified staff are hired, deployed, and trained to ensure that all aspects of the business operation are executed in accordance with the organization's environmental commitment.
2. All employees receive initial and ongoing training to ensure that they a) understand the environmental requirements of their job, and b) have the skills necessary to execute their job responsibilities in an environmentally sound manner.
3. Environmental excellence is the explicit responsibility of every employee throughout the organization, as demonstrated by the presence of environmental criteria in each employee's job description/performance evaluation, or by other means.
4. Exemplary environmental efforts are recognized and/or rewarded.

A total of seven questions included in the CFA questionnaire solicited information that could be evaluated against all four of the key indicators. In general, these questions asked respondents to provide information regarding personnel issues such as agency provision of formal training for employees charged with environmental compliance responsibilities; establishment of award systems for environmental performance; the inclusion of environmental performance in employee job descriptions and performance evaluations; and the agency view that it is a responsibility of every employee. Exhibit 5-11 presents the total number of respondents reporting multiple key indicative behaviors.

Exhibit 5-11 Element 6: Personnel Key Indicators Reported by 17 Civilian Federal Agencies



The following discussion compares specific survey findings to each of the four key indicators. As a group, these agencies reported engaging in all four of the key indicative behaviors. Only three of the respondents failed to exhibit at least one of the key indicative behaviors. Five of the respondents exhibited more than half of the identified key indicative behaviors.

Personnel Key Indicator:

1. Sufficient qualified staff are hired, deployed, and trained to ensure that all aspects of the business operation are executed in accordance with the organization's environmental commitment.

Findings:

One question included in the CFA questionnaire solicited responses that can be evaluated against this key indicator (i.e., "Has the agency established a formal training system for employees charged with ensuring agency compliance with environmental compliance both at Headquarters and at the Regional level?"). Three responses indicated for formal training systems, two additional responses indicated informal training systems.

Formal training systems reported consist of in-house courses including diverse curriculum, attendance at environmental conferences, and annual training. Semi-formal or informal systems consist of training programs for environmental monitors, NEPA training for environmental employees, and the evaluation of individual personnel responsibilities and provision of appropriate training. The twelve negative responses ranged from one-word answers to qualified answers indicating that no system is in place but courses can be attended as applicable.

Personnel Key Indicator:

2. All employees receive initial and ongoing training to ensure that they 1) understand the environmental requirements of their job, and 2) have the skills necessary to execute their job responsibilities in an environmentally sound manner.

Findings:

Two questions included in the CFA questionnaire solicited responses that can be evaluated against this key indicator.

- "Are agency employees provided with formal guidance regarding the application of Federal, state, and local environmental statutes and regulations to agency operations, including facility maintenance?"
- "Does the agency have a training program to foster the implementation of Pollution Prevention strategies as part of the agency's mission?"

These two questions asked respondents to provide information regarding the following items: agency provision of formal guidance to employees regarding environmental statutory requirements at the agency and facility levels; and the existence of an agency pollution prevention training program.

Eight of the fourteen positive responses to the first question exemplified this key indicative behavior. Formal guidance reported by respondents consist of written documentation directing all officials to implement agency requirements regarding environmental compliance, the training of all management employees regarding CERCLA and RCRA, the distribution of state law requirements

to employees in affected programs, seminars, and formal meetings. Six other positive responses were not considered to represent key indicative behavior because only selected employees receive the formal guidance.

The second question elicited five responses indicating that employees receive ongoing training that allows them to execute their job responsibilities in an environmentally sound manner. Responses ranged from agency provision of pollution prevention seminars to the distribution of updated information to inclusion in-house course materials. All but two of the 12 negative responses were unqualified.

Personnel Key Indicator:

3. Environmental excellence is the explicit responsibility of every employee throughout the organization, as demonstrated by the presence of environmental criteria in each employee's job description/performance evaluation, or by other means.
-

Findings:

Three questions included in the CFA survey solicited responses that are relevant to this key indicative behavior.

- "Do facility or site managers and regional directors who have operational and/or real property management responsibilities also have compliance with environmental requirements as part of their overall performance standards and evaluations?"
- "Does your agency view environmental performance not just as a staff function, but as the responsibility of all employees? All bureaus, offices and departments?"
- "How are environmental compliance responsibilities consistently enforced through disciplinary mechanisms administered by the agency executives and/or the personnel department?"

Five positive responses to the first question indicate that facility managers have environmental compliance as part of their performance evaluations. However, these responses do not completely exemplify the key indicative behavior at issue, which relates to all employees' job descriptions and performance evaluations. All other responses were negative. One negative response stated that "... an attempt to integrate ... [environmental] performance with merit evaluation was discouraged."

Regarding the second question, 12 of the 17 respondents reported that environmental performance is the responsibility of all employees. Several agencies reported that agency policies and directives are written to convey this concept. One agency indicated that the level of commitment may vary with different components of environmental performance. All negative responses were unqualified.

Regarding the third question, seven agencies reported enforcement mechanisms for environmental compliance responsibilities. None of these mechanisms were related to disciplinary actions. The nature of enforcement mechanisms ranged from the application of health and safety or environmental policies and directives, on site visits by monitoring unit personnel, and safety reviews. Qualified negative responses indicated that these agencies have no internal enforcement mechanisms or have mechanisms that are inconsistently enacted.

Personnel Key Indicator:

4. Exemplary environmental efforts are recognized and/or rewarded.
-

Findings:

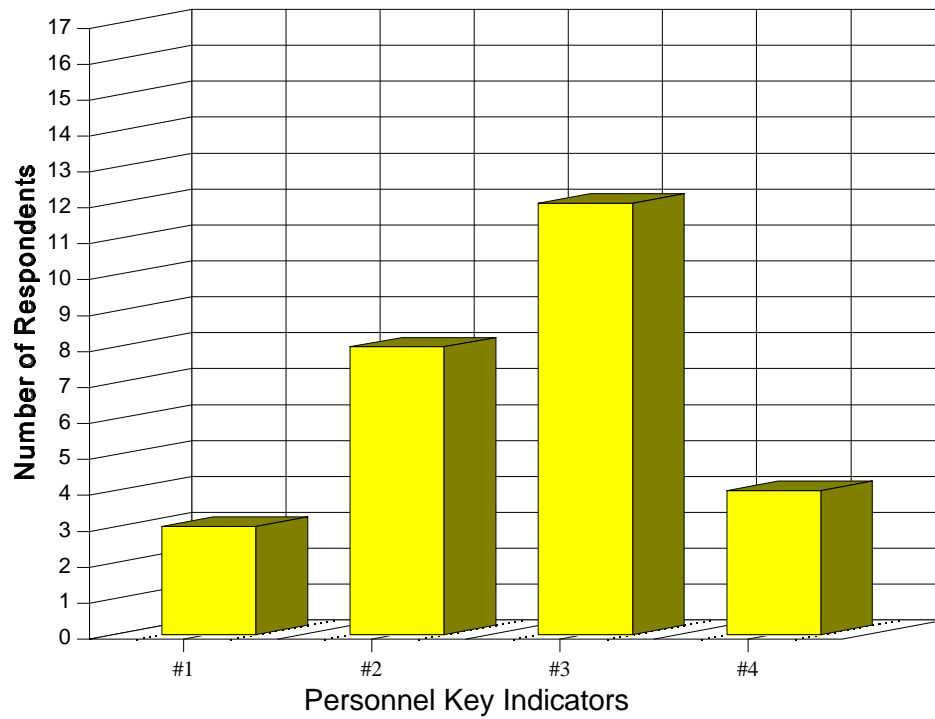
One question in the CFA survey solicited responses that can be evaluated against this key indicator (i.e., "Has the agency established employee award systems for recognizing good performance in environmental compliance areas?"). Four respondents reported key indicative behavior.

Of the positive respondents, one agency indicated that in addition to recognition of pollution prevention efforts, a program that fosters suggestions for improvement had been implemented. All other positive responses consisted of an unqualified "yes." Of the thirteen negative responses, several indicated that although employees may be recognized for good performance, there is not a separate program that acknowledges good environmental performance.

Benchmark Element Summary:

This section summarizes the collective behavior of the 17 respondent agencies as evaluated against the key indicators for this Benchmark Element. Exhibit 5-12 presents the total number of respondents reporting each key indicative behavior.

Exhibit 5-12
Number of Civilian Federal Agencies Reporting Each
Personnel Key Indicator



- #1 = Sufficient Qualified Staff Hired, Deployed, and Trained
- #2 = Initial and Ongoing Training for all Employees
- #3 = Environmental Excellence in the Responsibility of Every Employee
- #4 = Exemplary Efforts Recognized/Rewarded

CHAPTER 6: CONCLUSIONS

6.1 General Conclusions

An analysis of the questionnaire responses from each respondent group, and a comparison of responses between respondent groups, reveals response patterns that form the basis for general conclusions regarding structural, managerial, and operational performance. General conclusions are presented first, followed by a discussion of conclusions drawn that relate to performance within each benchmark element.

When comparing responses between respondent groups, it is important to keep in mind that the CFA questionnaire asked different questions than the survey distributed to DRAs and CPs. As a result, there are few key indicators in which a true "apples to apples" comparison can be made. However, because the patterns of responses are consistent throughout the six benchmark elements, general performance comparisons can be drawn.

The most readily apparent conclusion that can be drawn from a review of the data is that as a group, DRAs and CPs report engaging in substantially more key indicative behaviors than CFAs. This pattern is exhibited in responses to most of the six benchmark elements. DRAs and CPs report similar levels of key indicative behaviors on the whole. There is some discrepancy between benchmark elements in the number of indicative behaviors reported, and in the types of key indicators favored by each respondent group.

Throughout all six benchmark elements, more than half of the DRAs reported indicative behavior for each key indicator covered in the questionnaire. In most instances, all four respondents in this group reported indicative behavior on each relevant question. Overall, all three CPs also reported indicative behavior on each questioned indicator, in a majority of cases. However, within the Benchmark Elements of Management Commitment, Implementation, and Information Collection/Management/Follow-up, only one of the three CPs respondents reported indicative behavior on one of the key indicators.

With the exception of the Implementation Benchmark, CFAs reported fewer key indicative behaviors than either of the two other respondent groups. Even within the key indicators in which greater than 50% of CFA respondents reported indicative behavior, rarely do more than 10 of the 17 respondents respond affirmatively.

6.2 Element 1: Organizational Structure

Exhibit 6-1 displays the overall responses for each of the respondent groups to the Organizations Structure Benchmark Element. As the exhibit indicates, both the DRAs and the CPs reported organizational behavior consistent with each of the four key indicators. In fact, each of the four DRA respondents and each of the three CPs respondents reported indicative behavior for every indicator. In contrast, while only four of 17 CFA respondents reported the existence of formal

tracking systems covering environmental statutes and regulations, nine of 17 CFAs reported periodic meetings of senior managers covering environmental issues. Although the questionnaire distributed to CFA's targeted only two of the four key indicators, it appears that in comparison to the other two respondent groups, the CFAs do not demonstrate Best in Class performance against this benchmark element.

Exhibit 6-1
Overall Responses to Key Indicators for Benchmark
Element #1: Organizational Structure

	Defense Related Agencies	Corporate Participants	CFAs
Mission Statement Exists	✓	✓	N/A
Clear Lines of Authority	✓	✓	N/A
Statutory/Regulatory Tracking	✓	✓	●
High-Level Representation	✓	✓	✓

Legend	
✓ =	Positive responses from 50% of respondents or greater
● =	Positive responses from less than 50% of respondents
N/A =	Questionnaire did not address indicator

6.3 Element 2: Management Commitment

Exhibit 6-2 displays the overall responses for each of the respondent groups to this Benchmark Element. As the exhibit indicates, respondents were not asked questions that would solicit information concerning whether responding organizations make resources available to transfer environmental technologies and strategies between facilities. All of the DRAs and CPs reported that environmental concerns are integrated into business planning activities. 12 of 17 CFAs satisfied this key indicator by reporting that analyses were conducted to determine the potential impact of environmental issues on the Agency's mission.

Exhibit 6-2
Overall Responses to Key Indicators for Benchmark

Element #2: Management Commitment

	Defense Related Agencies	Corporate Participants	CFAs
Resources Made Available	N/A	N/A	N/A
Business Planning Integration	✓	✓	✓
Role in All Organization Decisions	N/A	N/A	•
Management Commitment Beyond Compliance	✓	✓	•
Formal Risk Management Program	✓	•	N/A
Budgeting Criteria Used	✓	✓	•
Headquarters Level Policies	✓	✓	N/A
Selection/Management of Contractors/Vendors	✓	✓	✓

Legend	
✓ =	Positive responses from 50% of respondents or greater
• =	Positive responses from less than 50% of respondents
N/A =	Questionnaire did not address indicator

Considerable differences between the three groups are apparent in responses to the key indicator that asks whether management commitment to the environment goes beyond environmental compliance. All four DRAs reported that their Agencies demonstrate this commitment through policy statements, published environmental performance reports, environmental awards, or other means. Two of the three CPs reported the presence of waste and emission reduction goals that exceed regulatory requirements. In contrast, only five of the 17 CFAs stated that their Agency backs up their verbal support for the environment by providing resources, training, and program development support.

One area in which questionnaire results indicate that both DRAs and CPs could improve is in the area of formal risk management programs. Only one of the three CPs and only two of four DRAs reported the presence of a formal risk management program. The CFA questionnaire did not address this issue.

In response to questions addressing capital budgeting methodologies that create a level playing field for potential environmental investments, all of the DRAs and CPs reported procedures that ensure that environmental projects receive equal or preferential treatment. In contrast, only six of 17 CFAs reported that field or headquarters environmental staff were involved in the Office of Management and Budget (OMB) A-106 investment review process.

Although both DRAs and CPs could improve in the area of instituting formal risk management programs, they generally reported behaviors consistent with this benchmark element. In contrast, although a majority of CFAs reported analyzing environmental implications to Agency mission requirements and include contract language requiring environmental compliance on the part of contractors and vendors, the overall reported performance of CFAs under this benchmark element demonstrates a need for improvement.

6.4 Element 3: Implementation

Exhibit 6-3 displays the overall responses for each of the respondent groups to the Implementation Benchmark Element. As the exhibit indicates, DRAs reported behaviors consistent with each of the three key indicators, CPs reported 50% or greater compliance with two of three indicators, and CFAs reported 50% or greater compliance with both of the key indicators addressed in their questionnaire.

The response of the DRAs to each question addressing key indicators in this benchmark element was unanimously positive. In questions relating to each key indicator, all four DRAs reported indicative behavior. CFAs reported a comparatively large proportion of positive responses, when compared to the two previous benchmark elements. Specifically, 10 of 17 CFAs satisfied the key indicator relating to the existence of comprehensive multi-media environmental programs through the reported presence of Agency programs to identify and address actual and potential environmental liabilities arising from past Agency practices. Similarly, 10 of 17 CFAs reported the development of emergency response procedures and have provided guidance to regional units regarding the characterization and control of problem waste streams.

In contrast, certain responses from CPs indicated that some efforts toward improvement may be warranted. Specifically, only one of these respondents reported the presence of formal corporate guidance to all departments to help ensure the attainment of corporate environmental goals. The two other respondents stated that this responsibility is left to individual facilities and operating units. Two of three respondents reported environmental performance goals that go beyond environmental compliance.

Exhibit 6-3
Overall Responses to Key Indicators for Benchmark
Element #3: Implementation

	Defense Related Agencies	Corporate Participants	CFAs
Environmental Performance Goals Established	✓	✓	N/A
Comprehensive Multi- media Environmental Program Exists	✓	✓	✓
Formal Guidance Developed and Disseminated	✓	●	✓

Legend	
✓ =	Positive responses from 50% of respondents or greater
● =	Positive responses from less than 50% of respondents
N/A =	Questionnaire did not address indicator

6.5 Element 4: Information Collection/Management/Follow-up

Exhibit 6-4 displays the overall responses for each of the respondent groups to this Benchmark Element. As the exhibit indicates, both the DRAs and the CPs reported indicative behavior for the preponderance of key indicators in which questions were posed. CFAs reported indicative behavior for one of the two key indicators in which questions appeared on their questionnaire.

All four DRAs responded positively to questions addressing the key indicators relating to the use of information systems, the documentation of monitoring results, and the use of corrective actions when problems are identified. Only two of four DRA respondents reported performing trend analyses to identify areas requiring environmental improvement.

All CPs reported that they document the results of environmental performance monitoring and institute corrective actions to address identified problems. Two of the three respondents utilized formal environmental information management systems. Like the DRAs, CPs did not consistently

practice trends analysis. Only one of three respondents in this group reported using this analytical tool.

Exhibit 6-4
Overall Responses to Key Indicators for Benchmark
Element #4: Information Collection/Management/Follow-up

	Defense Related Agencies	Corporate Participants	CFAs
Information Baselines Established	N/A	N/A	N/A
Information Management Systems Used	✓	✓	✓
Monitoring Results Documented	✓	✓	N/A
Performance Corrected to Meet Goals	✓	✓	●
Performance Corrected to Meet Goals	N/A	N/A	N/A
Trends Analysis Performed	✓	●	N/A

Legend	
✓ =	Positive responses from 50% of respondents or greater
● =	Positive responses from less than 50% of respondents
N/A =	Questionnaire did not address indicator

The questionnaire distributed to CFAs addressed only two of the six key indicators under this benchmark element. 13 of 17 CFA respondents reported conducting environmental audits and documenting results. Six of 17 CFAs reported the presence of a system to communicate compliance data from regional units to headquarters.

6.6 Element 5: Internal/External Communication

Exhibit 6-5 displays the overall responses for each of the respondent groups to this Benchmark Element. Although the questionnaire sent to CFAs only addressed two of the six key indicators, the exhibit indicates that CFAs did not appear to perform as well as DRAs and CPs in the area of internal and external communication.

Exhibit 6-5
Overall Responses to Key Indicators for Benchmark
Element #5: Internal/External Communication

	Defense Related Agencies	Corporate Participants	CFAs
Channels Exist for Reporting Environmental Concerns	✓	✓	●
Employee Suggestions Solicited	✓	✓	N/A
Successful Program/Strategies Communicated	N/A	N/A	N/A
Environmental Awareness Communicated	✓	✓	N/A
Cooperation with External Oversight Organization	N/A	N/A	N/A
Input Solicited from External Parties	✓	✓	✓

Legend	
✓ =	Positive responses from 50% of respondents or greater
● =	Positive responses from less than 50% of respondents
N/A =	Questionnaire did not address indicator

For each of the four key indicators covered in their questionnaire, every DRA responded positively. This pattern is repeated for CPs, with the exception of the key indicator concerning the solicitation of environmental input from external parties. In that case, two of three CPs respondents reported the existence of formal community outreach programs at a corporate level, while one respondent indicates that this communication responsibility is left to individual facility management.

Only three of 17 CFA respondents reported the existence of well publicized channels for employees to report environmental problems. Ten of 17 CFAs satisfied the key indicator relating to the solicitation of input from external parties by reporting that they either conduct comparisons of their environmental programs to those of other organizations or that they engage in a program that allows environmental assessments to be performed by outside entities.

6.7 Element 6: Personnel

Exhibit 6-6 displays the overall responses for each of the respondent groups to this Benchmark Element. As the exhibit clearly indicates, both DRAs and CPs satisfied each of the four key personnel indicators. However, CFAs only reported indicative behavior in the area of communicating that environmental protection is the responsibility of every employee.

Exhibit 6-6
Overall Responses to Key Indicators for Benchmark
Element #6: Personnel

	Defense Related Agencies	Corporate Participants	CFAs
Sufficient Qualified Staff Hired, Deployed, and Trained	✓	✓	●
Initial and Ongoing Training for all Employees	✓	✓	●
Environmental Excellence is the Responsibility of Every Employee	✓	✓	✓
Exemplary Efforts Recognized/Rewarded	✓	✓	●

Legend	
✓ =	Positive responses from 50% of respondents or greater
● =	Positive responses from less than 50% of respondents
N/A =	Questionnaire did not address indicator

Both DRAs and CPs reported that they use forecasting tools to project future environmental staffing needs and specify minimum qualifications for all environmental employees. In response to their question on this key indicator, five of 17 CFAs reported the presence of formal Agency training of all environmental compliance staff. All of the DRAs and CPs reported that environmental training is routinely provided to all employees. In response to questions concerning the environmental training of all employees, each DRA and CP reported that they train all employees. Six CFAs reported that training is provided only to staff with environmental responsibilities. Eight others responded that some level of training is provided to all employees.

A substantive majority of CFAs (12 of 17) reported that their Agency considers environmental performance the responsibility of every employee. Five of these 17 respondents included compliance activities within the performance evaluation process. Three of the four DRA responses and all of the responses from CPs indicated that systems are in place to hold environmental staff accountable for their environmental performance. One corporate respondent indicated that environmental performance is an evaluation criteria used for all plant managers and budget center managers.

Four of 17 CFAs, and all other respondents reported the use of award programs to recognize employee environmental achievements. Expanding the use of these programs within CFAs is needed, and may be a relatively easy way for CFAs to begin to improve their performance as it relates to the Personnel Benchmark Element.